THESIS

FOR THE AWARD OF DEGREE OF

DOCTOR OF MEDICINE

SESSION 2020-2023

"PSYCHOSOCIAL PREDICTIVE AND PROTECTIVE FACTORS FOR DEPRESSION IN PREGNANCY AND POSTPARTUM PERIOD"

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This is to certify that the protocol titled "PSYCHOSOCIAL PREDICTIVE AND PROTECTIVE FACTORS FOR DEPRESSION IN PREGNANCY AND POSTPARTUM PERIOD" will be a bonafide research work carried out by Dr. Sakshi Sharma under the esteemed guidance of Dr. Amoolya Kumar Seth Santosh Medical College and is presented before the ethical committee of Santosh University, Ghaziabad for requisite approval.

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ACKNOWLEDGEMENT

The path towards this thesis has been circuitous. There are many special people whom I would like to thank for their support, who stuck with me not only during the course of this thesis, but throughout my Master's degree and for their contribution both directly and indirectly.

Foremost, praises and thanks to the God, the Almighty, for his showers of blessings, for the guidance, strength, power of mind, protection and good health throughout and making it possible.

Most importantly, I owe and respectfully offer my thanks to my noble parents for their constant moral support and mellifluous affection which helped me to achieve success in every sphere of life and without their kind devotion, support and encouragement this thesis would have been a sheer dream.

I'm extremely thankful to my fiancé Dr. Akul for his constructive discussions, perseverance and cheering me every time during the completion of this study.

A profound sense of gratitude binds me to my Guide and path- finder Dr. Amoolya Kumar Seth, Head of the Department of Psychiatry, Santosh Medical College and Hospital, Ghaziabad, who always aimed at moving me forward, inspiring and molding my academic enhancement and for his generous support. I'm grateful and thankful for his dynamism, vision, suggestions with kindness and motivation to accomplish this study.

I'm also highly obliged to my Co-Guide of my Thesis Dr. Neelima Agarwal, Professor of obstetrics and gynecology, Santosh Medical College and Hospital, Ghaziabad, for his guidance and co-operation during completion of my study.

I am also grateful to Dr. Brijesh Saran Assistant Professor of Psychiatry, Santosh Medical college for his constant support, motivation and to help me in completing my thesis

I'm also thankful to all the participants who have extended a great deal of co-operation which a study of this nature requires.

I submit this Thesis of mine with great humility and utmost regard.

(Dr. Sakshi Sharma)

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INTRODUCTION

The most lovely phase in a woman's life is at the time of pregnancy and delivery, which gives her the peace of mind needed to nurture a new life. However, some women find it difficult to handle the emotional upheaval and are more likely to have emotional disturbances throughout their childbearing phase, which may lead to hopelessness and depression. Using an accurate metric, it is estimated that 13% of new mothers suffer from this crippling postpartum mood disorder.[1] Perinatal depression, which is defined as depression occurringat the time of pregnancy or during the 1styear after giving birth, affects 10-15% of all women and up to 28% of those who live in poverty.[2] Roughly 10-20% of pregnant women in the first 12 months after giving birth suffer depression.[3]

It should be emphasized that up to 50% of instances of postpartum mood disorder go undiagnosed.[4] Because it has an effect on both mother and child health, women's mental health during pregnancy and after delivery is a top public health issue. Throughout pregnancy and the postpartum period, there are several changes in the physical, hormonal, psychological, and social environments, all of which have an immediate impact on a person's mental health. Thus, it is believed that this stage has a high risk of either the development of mental disease or the worsening of an already present psychiatric problem.[5]

Depression may have a substantial influence on a woman's relationships, general feeling of wellness, and quality of life. Children may suffer damage if depression is not appropriately treated or managed. The interaction of several variables, such as family structure, level of education, marital status, social support, and culture, determines how much these mental health changes affect women throughout pregnancy and after giving birth.[5]

Pregnancy is a period of high vulnerability for depression.[6]Pregnancy causes significant psychological and social changes in the mother, which have been related to anxiety and depression symptoms. Depression during pregnancy is a public health concern for three main reasons: To begin with, the incidence of depression during pregnancy is significant during the prenatal period.[7] Second, it is the most powerful risk factor for postpartum depression.[8-10] Third, it has a negative impact on mother and fetal outcomes.[11]

It might be especially difficult to detect depression during the first trimester. Bennett et al.[12,13] found a 7.4% incidence of depression during the first trimester. This proportion increased to 12.8% during the second trimester and maintained at 12% throughout the third trimester. Preterm delivery, children emotional issues, behaviour problems, and, in some studies, poor cognitive development are all on the rise, according to systematic evaluations. Suicide, a leading cause of maternal mortality, may come from severe depression.[14]

According to researchers, affective illness that develops during the postpartum period is not substantially different from affective disease that develops in women at other periods. This viewpoint was mirrored in the DSM-IV criteria, which listed postpartum psychiatric disease as a subtype of either bipolar disorder or major depressive disorder. The onset is usually four to six weeks postpartum, although it may happen at any moment within the first year following delivery. It affects about 10-15% of women.[15]

Clinical depression that may occur after delivery is known as postpartum depression (PPD). Sadness, low energy, altered sleeping and eating habits, crying spells, anxiety, and irritability are just a few possible symptoms. It often starts four weeks after giving birth and may last for

many months or even a full year.[16] Some of the symptoms of postpartum depression include sadness, guilt, worry, emptiness, social exclusion, feeling inadequate for caring for the infant, and sleeping and eating problems. [17]

Hormonal imbalance, which begins to emerge in a woman just after childbirth, is the main cause of this condition. Severe baby blues are a result of an estrogen and progesterone imbalance. Depression may be brought on by stressful life experiences including abuse, poverty, unsatisfactory relationships, the loss of a loved one, or having to care for a dependent family member. Women may feel unable to handle the additional responsibilities of pregnancy due to an excess of ongoing life difficulties. A major factor in the development of depressive illnesses is illiteracy. Lack of literacy causes a woman to be unaware of the many changes she will experience during this time, making the abrupt responsibility of caring for a newborn overwhelming. The availability of proper medical services for women suffering from postpartum depression is further hampered by illiteracy. Families are unable to identify symptoms, thus no assistance is requested. Postpartum depression is also influenced by a lack of social support, an unhappy marriage, and unwanted pregnancies.[16]

Affecting 10-20% of periparous women, postpartum depression (PPD) is characterized by tearfulness, despondency, emotional liability, guilt, loss of appetite, suicidal ideation, sleep disturbance, feeling inadequate and unable to handle the baby, lack of concentration and memory, fatigue, and irritability. 10–20% of periparous women get postpartum depression (PPD). The greatest risk for postpartum depression is those women who had experienced depression in the past and while pregnant postpartum depression (PPD). The likelihood of postpartum depression recurrence is around 25% greater for women who have already received a diagnosis than for other women.[19]

The postpartum blues, also known as PPB, afflict anywhere from 50–80 percent of primiparous. Symptoms include moments of feeling good interspersed with intervals of feeling nervous, irritated, or low mood. Mood swings are also a symptom. It's also possible that they will have trouble sleeping. The symptoms typically start between three and four days after birth, peak between days five and seven, and begin to subside on day 12.[12]

Postpartum psychosis is extremely uncommon, occurring in just 1-2 of every 1000 births. It is characterised by an acute psychotic state that includes disorientation, delirium, hallucinations, and sleeplessness in addition to other symptoms.[10] At some point during the postpartum period, between 4-6 percent of women are affected with panic disorder. Shortness of breath or hyperventilation, palpitations, tachycardia, trembling or shaking, chest pain or discomfort, sweating, feeling unreal or detached from your surroundings, feeling suffocated, nausea or abdominal distress, dizziness, lightheadedness, or fainting, hot or cold flashes, fear (of dying, losing control, or going insane), and/or paresthesias are all symptoms. One of the most prevalent symptoms of anxiety is shortness of breath, often known as hyperventilation (numbness or tingling sensation). [15]

Postpartum generalized anxiety disorder (PP GAD) affects 4.4% of women who have just given birth. Anxiety, apprehensive expectation, nervousness, fatigue, excessive and intrusive or persistent worries, an inability to tolerate uncertainty, difficulty concentrating or focusing, muscle tension, sleep disturbance, feeling tense and restless or jumpy, stomach issues, nausea, and/or diarrhoea are all symptoms of this disorder.[18]

OCD(Obsessive compulsive disorder) is the most misunderstood and misdiagnosed of the postnatal illnesses, as obsessions and compulsions may arise alone or in combination with the diagnosis of significant depression and/or panic disorders.[19] Approximately 3-5% of primiparous are believed to develop obsessive-compulsive disorder during the postpartum period.

Exposure to traumatic events, upsetting memories of the events, nightmares, flashbacks of psychological distress, negative mood, altered sense of reality, inability to recall significant details of the events, attempting to avoid symptoms and reminders of the events, problems with concentration, sleep disturbances, and hypervigilance are all symptoms of post-traumatic stress disorder.[20]

The following risk factors, according to a recent review of the literature, are the best indicators of postpartum: Low income, having a daughter when a son was desired, and having a difficult relationship with the mother all contribute to depression, as do being depressed or anxious during pregnancy or having experienced stressful life events while pregnant, having little social support, and having a prior history of depression. [21]

According to research, more than seventy percent of those suffering from serious mental illnesses in developing nations go untreated.[22] Women are more susceptible to most emotional disorders during their reproductive years. Holden mentioned anorexia, post-traumatic stress disorder, anxiety, and depression among them. [23] In the first year following a first delivery, mothers are more than twice as likely to require mental health care, and the increased risk of depression lasts for the first five postnatal months. Depression during the postpartum period causes a number of issues for the individual, family, and community. Oates cautions that there is even a risk of suicide in cases of severe depression, particularly when combined with psychotic symptoms. [24]

The present study was done to assess the psycho-social predictive and protective factors for depression in antenatal and post-partum period in tertiary level teaching centre.

AIMS AND OBJECTIVES

- **AIMS-**

`To study the psycho-social predictive and protective factors for depression in antenatal and post partum period in tertiary level teaching centre.

- **OBJECTIVES-**

1. To study psycho-social and demographic profiles in women with antenatal and post partum depression.

2. To analyze the factors that are predictive or protective in antenatal and postpartum depression.

3. To elicit the effects of stressful life events in ante partum and postpartum period.

REVIEW OF LITERATURE

Gavin et al (2005) found that the prevalence on mental illness in industrialized nations was 18% among women, who had sad mood during the prenatal period. They conducted formal clinical interviews to make the diagnosis, and 13% of the participants met the DSM-4 diagnostic criteria for a severe depressive episode. [25]

When studying the point prevalence of depression, Bennett et al. (2004) found that it was 12.8% in the second trimester and 12% in the third. [26] Imran et al. 2009 found that 42.7% of pregnant women (n=213) had prenatal depression using the Edinburgh Postnatal Depression Scale (EPDS). [27]

Studies on the effects of prenatal depression on mother-infant bonding and the development of postpartum depression were conducted by Murray et al., 2000.[28]

Misri and colleagues investigated the impact of prenatal depression or anxiety on postpartum parental stress. According to the findings, depression during pregnancy has a direct impact on parental stress.[29]

In 2009, Klainin and Arthur conducted a review of the literature from 17 Asian nations and discovered an incidence of postpartum depression ranging from 3.5% to 63.3%.[30]

In 11 locations throughout the world, a research on the prevalence of postpartum depression found that depression was most common in Taiwan (61%), Guyana (57%), India (32%), and Korea (36%). The main contributing factors include life events, disrupted relationships, and prior and familial histories of depression. [31]

The prevalence of depression during pregnancy was found to be 9% in a 2006 research conducted in the United States population on 1662 pregnant women. The study used the EPDS (Edinburgh Post-Natal Depression Scale) to look for prenatal depression. The same research also discovered that a prior history of depression was the best indicator of prenatal depression.[32]

Diagnostic interviews were used by Kitamura et al. (2006) to examine the frequency of postpartum depression. They found that almost a third of the women who had postpartum depression also suffered from prenatal depression. [33]

Research conducted by Felice et al. (2004) found that postpartum depression affected 8.7% of mothers and 3.9% of mothers had postoperative depression as a result of an unrelated event. Only 4.8% of instances had their onset after birth. [34]

Researchers Agoub and Alami of Morocco employed the Edinburgh Postnatal Depression Scale and the Mini International Neuropsychiatric Interview to identify cases of postpartum depression.[35]

Postpartum depression was estimated to have a prevalence in India ranging from 11% to 26.3% by Patel et al., 2002[36] using EPDS (Edinburgh postnatal deprerssion), Chandran et al., 2002[37] [using CIS-R], Savarimuthu et al., 2010[38] using EPDS (Edinburgh postnatal deprerssion), and Savarimuthu et al., 2012[39] using EPDS (Edinburgh postnatal deprerssion). According to Patel et al., postpartum depression is more common than prenatal depression, however other studies show that antenatal depression is more common than postpartum depression.

The EPDS(Edinburgh postnatal deprerssion) was shown to be the most often used scale in postpartum depression research.[39]

Massoudi (2007) used the EPDS(Edinburgh postnatal deprerssion) in a Swedish study that found PND in 12.5% and 8.3% of women who gave birth at 8 and 12 weeks, respectively. At

the 6-8 week period, postpartum depression was found to be 23% in an Indian study by Patel et al. Savarimuthu et al. (2010) discovered postpartum depression in 26.3% of women using the EPDS(Edinburgh postnatal deprerssion). [37]

The research done in this area was as follows:
In Cyprus, 226 new moms were judged to have PPD(Postpartum depression) by Moraitou et al. (2010) based on certain socioeconomic and psychological background factors. On the fourth day after delivery, participants completed the BDI and the EPDS(Edinburgh postnatal deprerssion). According to the BDI findings, 21.3% of the participants had depression, and the EPDS(Edinburgh postnatal deprerssion) results revealed that 13.7% of them were at risk of developing postpartum depression. These findings were shown to be related to psychopathology that before delivery, but postpartum depression was not related to factors like age, career, or educational attainment. [40]
Postpartum depression is more likely in common Asian and Pacific Islander racial/ethnic groups, according to Hayes et al. (2010). 14.5% of women in Hawaii who had recently given birth alive had SRPDS(Self reported postpartum depression symptoms), and 30.1% may have had it. In comparison to white women, increased risks of SRPDS(Self reported postpartum depression symptoms) was found among Korean (adjusted odds ratio [AOR] = 2.8), Filipino (adjusted odds ratio [AOR] = 2.2), Chinese (adjusted odds ratio [AOR] = 2.0), Samoan (adjusted odds ratio [AOR] = 1.9), Japanese (adjusted odds ratio [AOR] = 1.6), Hawaiian (adjusted odds ratio [AOR] = 1.7), other Asian (adjusted odds ratio Women who received Women, Infant, and Children (WIC) benefits during pregnancy (AOR = 1.4), had unintended pregnancies (AOR = 1.4), experienced intimate partner violence (AOR = 3.7), smoked (AOR = 1.5), used illegal drugs (AOR = 1.9), or experienced intimate partner violence (AOR = 3.7) were more likely to have SRPDS(Self reported postpartum depression symptoms). Although this risk was not as pronounced as the danger for SRPDS(Self reported postpartum depression symptoms), certain categories were similarly at greater risk for potential SRPDS. Nearly a third of women reported suspected SRPDS(Self reported postpartum depression symptoms), and one in seven women reported SRPDS(Self reported postpartum depression symptoms). [41]
In their research, Bener A, Burgut FT, GhuloumS, and Sheikh J (2011) found that 17.6% of the study sample had postpartum depression. Postpartum depression was significantly more common in mothers over the age of 35 (49.90% vs. 39.20%), with lesser education, housewives and low monthly income. Moms who were depressed had considerably greater rates of maternal problems (38.7% vs. 26.1%) and caesarean sections (36.2% vs. 28.8%) than mothers who were not depressed. The main predictors of postpartum depression were financial difficulties, prematurity (OR=1.64; p = 0.025), poor family support (OR=1.52; p = 0.016), marital dissatisfaction (OR=1.26; p = 0.005), and a poor marital relationship.[42]
130 women were screened by Manjunath et al. (2011) to determine the potential correlates of PPB in an urban society. 123 mothers who met the inclusion requirements were selected from the study population. 72 of the 123 women who underwent screening for postpartum depression had the diagnosis, representing a 58.5% prevalence rate. 91% of the moms were literate, and 77% of them were housewives. About 9% of the moms had had a prior miscarriage, and 8% had experienced a mental disorder in the past. Two mothers had a clear

propensity for suicide by EPDS(Edinburgh postnatal deprerssion). Mothers with female offspring (69%, P=0.05), families with low income (62%, P=0.05), and those living in joint families (71%, P0.001) were more likely to have an EPDS(Edinburgh postnatal deprerssion) score of 10 or higher. Postpartum depression was also linked to a poor marital relationship (91%, P 0.001) and a lack of emotional and physical support (P 0.001).[43]

Nagy et al. (2011) published the results of the first epidemiological study on the incidence of postpartum depression and its risk factors in Hungary, using the BDI(Beck depression inventory) and EPDS(Edinburgh postnatal deprerssion). 3 to 26 weeks after giving birth, 1030 mothers were examined for depressive symptoms. 10.81% of the sample, according to the study, scored higher than the threshold value of 13, and the EPDS(Edinburgh postnatal deprerssion) had a 76% sensitivity and 92% specificity for detecting postpartum depression symptoms. Also examined were 24 socio-demographic, socio-psychiatric, personal, and obstetric factors. According to the results of a hierarchical logistic regression study, postpartum depression was most strongly predicted by the mother's depression during pregnancy. In addition to depression before pregnancy, poor living circumstances, marital status, and a history of alcoholism in the family were shown to be predictors of postpartum depressive symptoms. [44]

Shaily Mina et al. (2012) found that of the 100 women enrolled, 59% were expecting a baby and 41% were new mothers. Both groups had similar sociodemographic characteristics. Among women who are presently pregnant, 27% and 17%, respectively, scored over the cutoff on the anxiety and depression measures, while 17% of postpartum women did the same. In the antepartum and postpartum groups, there were 5.1% and 4.8% co-morbid cases of anxiety and depression, respectively. On the independent sample t-test, the overall hospital anxiety and depression scale score and the depression subscale score of the hospital anxiety and depression scale were substantially different for both groups (p 0.05). With regard to depression subscale scores, there was no discernible difference between the groups. [45]

According to Desai Nimisha et al. (2012), 12.5% of women have postpartum depression. Women experiencing tension during pregnancy [OR = 11.716]; Women who could not confide in partner [OR = 10.43]; and Absence of someone other than mother and partner in whom the women could confide [OR = 8.909] were found to be the strongest predictors for developing postpartum depression. Women who delivered a girl were observed to have higher odds of getting PPD [OR = 5.487], multigravida [OR = 5.91], women having past history of miscarriage [OR = [46]

In a tertiary teaching hospital in New Delhi, Dubey et al. (2012) investigated the prevalence of peri-partum depression. Five hundred and six (506) peripartum women were questioned using a structured questionnaire that asked about socio demographic information like SES, structure of the family, relationships with the husband and the mother-in-law, previous obstetric history and child gender, any history of prior psychiatric illness, and the outcome of the current pregnancy. A Hindi-translated version was used to score the EPDS(Edinburgh postnatal deprerssion). Data were examined with Epi Info 3.32. Out of 506 women, 31 (6%) had an EPDS(Edinburgh postnatal deprerssion) score of less than 10. There was shown to be a statistically significant link between peripartum depression and the birth of a female child, nuclear family structure, and a troubled marital relationship. It was determined that normal

prenatal and postnatal treatment should include an evaluation of the mother's mental health.[47]

In comparison to non-Hispanic Whites, Goyal et al. (2012) found that Asian American subgroups (Asian Indian, Chinese, Filipino, Japanese, Korean, and Vietnamese) had a higher clinical diagnostic rate of postpartum depression (PPD). When all Asian American moms were combined, the diagnostic rate for postpartum depression(PPD) was much lower than it was for non-Hispanic White mothers. Additionally, among the six Asian American subgroups, Asian Indian, Asian Chinese, and Filipino women had considerably lower postpartum depression(PPD) diagnosis rates than non-Hispanic White moms. Age, cesarean section, and race/ethnicity were significant predictors of postpartum depression(PPD) in multivariate analyses. The authors came to the conclusion that PPD diagnosis rates varied across the various Asian American subgroups and were lower among Asian Americans. [48]

Liu and Tronick (2013) identified factors that account for variations in prevalence rates across groups in order to explore racial/ethnic inequalities in the diagnosis of postpartum depression (PPD). While Asian/Pacific Islander women were remained 3.2 times more likely to be diagnosed after adjusting for sociodemographic and maternal stressors, postpartum depression(PPD) rates were higher among Black and Hispanic people compared to White people. Asian/Pacific Islanders were less likely than other groups to have this dialogue with their doctors regarding low mood, but they were more likely to acquire a diagnosis after doing so. Diagnosis of prenatal depression increased the risk that women in all categories would get PPD diagnoses. African Americans were less likely to get a postpartum depression (PPD) diagnosis if they had gestational diabetes; Asian/Pacific Islanders and Whites were more likely to receive a postpartum depression(PPD) diagnosis if they had given birth to a female newborn. Depending on which race/ethnic groupings are being studied, different risk variables account for variations in postpartum diagnosis prevalence rates. For all populations examined, prenatal depression has been shown to be a significant predictor of postpartum depression diagnosis; however, the relationships between other postpartum depression risk factors and diagnosis differ by race/ethnic group. [49]

In an experimental research, Einar et al. (2014) investigated the mental health literacy of postpartum depression in an Australian population sample. Five hundred twenty female respondents took part in this trial. One of three scenarios portraying a "depressive" episode was randomly given to participants, who then responded to a questionnaire to test their knowledge of mental health issues and their ability to identify prenatal depression and associated risk factors. Researchers discovered that the sample had a high level of mental health literacy and the capacity to recognize prenatal depression. [50]

An analysis of papers on PND in Arab women was undertaken by Shanthi, Ramasubrananiamet al. in 2014. The review included writing from 2005 through 2012. The review included 17 studies. The reported prevalence of postnatal depression ranged from 10 to 80 percent, respectively. Significant risk factors found in the studies were poor body image, strained relationships with partners and in-laws, unintended pregnancies, a lack of social support, a belief that parents lack expertise, and premature delivery. To promote the mental health of postpartum moms, midwives and other healthcare professionals should get training in recognizing the risk factors for postnatal depression. [51] Saldanha et al. (2014) conducted research on the prevalence and risk factors for postpartum depression. Married

women between the ages of 18 and 35 who visit the outpatient clinic for prenatal and postnatal care. Postpartum depression (PPD) was identified in accordance with the worldwide classification of disorders (ICD 10). Out of the 200 women who enrolled for the research, a total of 186 had EPDS scores over 13 and were classified as depressed according to ICD 10 diagnostic criteria. 146 individuals were not depressed. 14 women discontinued the research. Postpartum depression(PPD) prevalence was 21.51%. 14/27 (51.8%) of the risk variables linked to Postpartum depression(PPD) were determined to be statistically significant by the research. A significant percentage of moms had high prenatal GHQ and postnatal BDI(Beck depression inventory) scores. In the sad group, BDI(Beck depression inventory) and Edinburgh postnatal deprerssion (EPDS) scores persisted at high levels throughout the postnatal follow-up, indicating the existence of Postpartum depression (PPD) in moms of young babies. It was determined that there was a need to educate primary healthcare providers about Postpartum depression(PPD) and that it is a significant health concern that should not be disregarded. [52]

In Nepal, Shrestha et al. (2014) looked at the relationship between socio-demographic factors and postpartum anxiety. A demographics questionnaire, the Newborn Care Knowledge Questionnaire, and the State-Trait Anxiety Inventory for Adults were the three tools utilized to gather the data. Women' knowledge of infant care, general education level, and income were all negatively connected to their levels of anxiety; mothers from poorer socioeconomic backgrounds also showed greater levels of postpartum anxiety. Low social support and strained relationships with spouses or mothers-in-law increased the risk of postpartum anxiety and depression. It was shown that knowledge of infant care, socioeconomic level, and maternal education were the main causes of postpartum anxiety. [53]

In a 2015 study, Zagade et al. evaluated the prevalence of depression among postpartum women hospitalized to Krishna Hospital. A huge majority (87.9%) of the postnatal mothers' demographic features were found to be Hindu, with 63% more being recorded in the age range of 21 to 25. According to their employment, 85% of women are housewives, 67% of moms are from joint families, and 75.6 percent of births were normal. In 60 samples, it was shown that post-natal moms between the ages of 21 and 25 were more likely to suffer from post-natal depression. Postnatal women with a high school education tended to be more numerous. More prevalence was seen in them. Postpartum women tended to come from blended families. Also, prevalence was more noticeable in them. It was not evident if a youngster was male or female. There was none whatever. Normal deliveries were found to be more common than L.S.C.S. Within 60 samples obtained from the maternity ward of Krishna Hospital, Karad, postnatal depression was more common among them. [54]

In a study published in 2015, Giri et al. examined the incidence of depression symptoms and risk variables among postpartum women. Using systematic random sampling, a cross-sectional research of 346 postpartum moms was carried out six to ten weeks following birth. A semi-structured questionnaire was used to conduct interviews with mothers. 30% of moms reported having post-partum depression symptoms. In comparison to older moms, mothers 20-29 years oldhad lesser chances for having depression symptoms. Similar to this, moms with a history of pregnancy-related health issues were more likely than mothers without a history to have depressive symptoms (aOR = 2.16) and subjective experiences of stress (aOR

= 3.86). According to the authors, a significant proportion of postpartum mothers—nearly one-third of the participants—reported having depression symptoms. [55]

Hirani and Bala (2015) conducted a research to identify postpartum mothers with depression. After obtaining the women's verbal consent and conducting house-to-house visits with 516 postpartum women using the Edinburgh Postnatal Depression Scale (EPDS), a community-based cross-sectional study was conducted in rural Ahmedabad. In rural Ahmedabad, depression was 12% common in postpartum women. Age >30 years, nuclear family, marital abuse, and an unbalanced budget are sociodemographic characteristics of postpartum women that are highly linked to depression. Significantly correlated with depression were factors related to the mother's health, including late pregnancy, poor obstetric history, unintended pregnancy, preterm birth, caesarean section, past history of any psychiatric illness, current history of any chronic illness, and complications to women during the antenatal, intrapartum, or postpartum period. Significant correlations between depression and factors connected to children, including delivery of a female child, extremely low birth weight, and complications to children throughout the antenatal, intrapartum, and postpartum periods. Conclusion: Postpartum depression screening improves diagnosis and may catch the condition sooner. [56]

In India's Karnataka state, Shivalli et al. (2015) conducted research on the socio-demographic, obstetric, and pregnancy outcome determinants of postnatal depression (PND) in rural postnatal mothers. In order to determine the independent determinants of postnatal depression (PND) risk, logistic regression was used. Postnatal depression (PND) prevalence was 31.4%. Joint families, women who worked, husbands that did not did farming, being poor, female babies, and pregnancy difficulties or recognized medical conditions all significantly increased the risk of postnatal depression (PND). Poverty, the delivery of a female infant, pregnancy problems, or a history of sickness persisted as independent predictors of postnatal depression (PND) in binomial logistic regression. It was shown that rural postnatal women had a high (31.4%) risk of postnatal depression (PND). Pregnancy problems, poverty, the birth of female children, and established medical conditions may all indicate an increased risk of postnatal depression . Postnatal depression (PND)screening need to be a crucial component of postpartum treatment.[57] Suguna et al. (2015) examined the incidence of postnatal depression among women visiting a rural maternity facility in South India in order to pinpoint the risk factors causing postnatal depression. A cross-sectional research including 108 women was conducted. An 18% prevalence of likely depression was discovered. High-risk pregnancies, discontent with in-laws, poor family income, mood swings, and depressed mood during pregnancy were identified to be risk variables that were strongly related with postnatal depression. This research helped to develop therapeutic and prevention methods for postpartum depression by identifying specific sociodemographic and obstetric risk variables for postnatal depressive symptoms in a rural community.[58]

Goyal et al. (2015) looked at the postpartum depression (PPD) and mental health help-seeking behaviors of Asian Indian moms. In this research, 12 self-identified, married, Asian Indian moms who had just given birth to a healthy baby in Northern California and were between the ages of 29 and 40 participated. The EPDS results showed that two subjects had a higher chance of having PPD. Two major themes emerged from the content analysis: (1) Maternal mental health help-seeking behavior; and (2) Culture-specific postpartum traditions and ceremonies and their involvement in maternal-infant postpartum rehabilitation.[59]

According to Nawa Raj Subba's research, 12.3% of Rajbanshi moms had postpartum depression. Of the 46 PPD moms overall (EPDS cut off = 13), 37 (80.43%) were very poor, 4 (8.7%) were poor, and 5 (10.87%) were wealthy. By level of education, 12 (26.09%) were in class 1–10, 2 (4.35%) were SLC/IA, 21 (45.65%) were illiterate, 11 (23.91%) were not in schooling, and 2 (4.35%) were illiterate but educated. No moms with BAs or higher have been identified in PPD. Similar results were found for occupations: labor (30.65.22%), agriculture (12.59.%), business (2.3%), and services (2.3%). When their last child was born, 12 (26.09%) moms used contemporary practice or a hospital delivery, whereas 34 (73.91%) mothers used traditional treatment or a home birth. [60]

Robertson E, Grace S, Wallington T, and Stewart DE (2016) General Hospital Psychiatry 26: 289–295 (2004). In order to identify risk variables, postpartum Gujarati women were randomly chosen and evaluated using a semi-structured proforma that included DSM-IV TR diagnostic criteria for depression and a prediction score of postnatal depression. 12.5% of new mothers reported having postpartum depression. The strongest risk factors for postpartum depression were observed to be the delivery of a girl child (OR = 5.487), multigravida (OR = 5.391), women with a history of miscarriage (OR = 4.613), women who felt tense during pregnancy (OR = 11.716), women who could not confide in a partner (OR = 10.43), and the absence of someone other than the mother and partner in whom the woman could confide (OR = 8.909). [61]

According to Paramita Sengupta (2016), 8.9% of the study's participants had depression. The frequency was noticeably greater among urban dwellers, women, single people living alone (nuclear families), illiterates, those without jobs, and the poor with a monthly per capita income (MPCI) of less than Rs. 1000. Both functional impairment and cognitive impairment were shown to be strongly associated with a greater prevalence of depression. The nuclear family model, urban residency, and prevalence of depression were also revealed to be significant predictors of depression. In the multivariate analysis, neither occupational nor educational status was found to significantly influence depression. [62]

A prospective observational research by Lakshmi Bhuvana et al. (2016) included postpartum women who had just given birth. Using the Hamilton rating scale for depression, 236 postpartum women were evaluated for depression; 74 (31.4%) of them tested positive. Using Hamilton's depression assessment scale, it was determined that 81.1% of the depressed postpartum women had mild depression, 14.9% had moderate depression, 2.7% had severe depression, and 1.3% had very severe depression. The majority of postpartum women were between the ages of 21 and 25, and the majority of them were found to be slightly, then moderately, depressed. The majority of postpartum depressed women are from the gravidae-2 (47.3%) and gravidae-1 (31.1%), respectively. According to the study's findings, postpartum depression occurs in 31.4% of women. The majority of sad people fell into the mild to severe depression category. Due to a variety of factors, including stillbirths, family pressure over the child's gender, strained relationships with husbands, and past miscarriages, the majority of depressive people are multi-gravidae. [63]

In a 2016 study, Safadi et al. looked at postpartum depression in urban Jordanian women and how it related to demographic, maternal, and child health issues. Five mother and child healthcare facilities and one significant hospital in Amman, Jordan, provided the participants (n = 315). The findings revealed that 50% of the sample had mild depression and 25% of

postpartum women had moderate to severe depression. Age, education, work status, and income were the only socio-demographic factors that were not substantially correlated with post-partum depression; however, breastfeeding and the style of delivery were the only obstetric/infant factors that were. Postpartum depression was significantly associated with 15 obstetric, gynecologic (such as episiotomy discomfort, infection), and general health disorders (i.e. fatigue, headache). Instead of only concentrating on women's intrinsic demographic variables, nurses and midwives should stress post-partum depression screening, follow-up, and adequate care of mother and baby health issues predisposing to post-partum depression. [64]

In order to determine the risk factors for postpartum depression (PPD) development in Indian women, Khan and Basu (2016) evaluated the incidence of Post-Partum Depression (PPD). 278 new moms (post-delivery 10 days to 3 months) who attended post-partum clinics at K.P.C. Medical College & Hospital participated in this cross-sectional research. Using a pre-programmed questionnaire, socioeconomic characteristics and specific obstetric variables were examined. Using the Edinburgh Postnatal Depression Scale, PPD was calculated (EPDS). People who had a score of higher than 13 were diagnosed with PPD and sent for further examination to a psychiatrist. PPD was found to be 26.97% prevalent. The most prevalent risk variables were nulliparity, advanced age, poor socioeconomic status, minority community, foetal problems, and vaginal birth. This research found that PPD should be regularly checked for in all moms, but particularly in those who have risk factors. [65]

Kahlaifa et al. (2016) examined the risk variables for postnatal depression (PND) in a sample of Sudanese women in the state of Khartoum at three months after giving birth. Recruitment was place at two significant antenatal care (ANC) clinics that are part of two maternity teaching institutions in the state of Khartoum. Violence history elevated the risk of PND seven times, OR=7.4. Older moms had an almost 20% lower chance of developing PND, OR=0.82. Prenatal vitamins taken regularly and exclusively throughout pregnancy are linked to an 80% reduction in the risk of PND (OR=0.2 and 0.17, respectively). [66] Shidhaye et al. (2017) looked at the likelihood of antenatal depression in rural Maharashtra, a state in western India, and especially evaluated the relationship between marital and gender disadvantage variables as well as gender preference for a male child with antenatal depression. 51 women (16.9%, 95% CI 12.6-21.1%) had the result of prenatal depression (EPDS > 12). The outcome of prenatal depression was significantly correlated with feeling pressured to deliver a male child (adjusted odds ratio (OR): 3.0; 95% CI 1.4-6.5). Additionally substantially linked with prenatal depression were the in-laws' unfavorable response to the dowry (adjusted OR 11.2; 95% CI 2.4-52.9) and the in-laws' challenging relationship (adjusted OR 5.3; 95% CI 2.4-11.6). It was determined that gender disadvantage characteristics, particularly those connected to a desire for a boy child, are linked with prenatal depression in rural women of Western Maharashtra. [67]

After obtaining their informed consent, Salian et al. (2017) interviewed 128 pairs of parents (64 mothers and 64 fathers) using a Case Report Form. The Multidimensional Assessment of Fatigue (MAF) Scale, Perceived Stress Scale (PSS), Edinburgh Postnatal Depression Scale (EDPS), and PostPartum Bonding Questionnaire were used to assess the various psychosocial domains (PBQ). Each participant's total score on each scale (or factorial total score in the case of the PBQ) was calculated and analyzed. Mothers were found to have significantly

higher levels of fatigue (p-value 0.020), stress (p-value 0.034), and depression (p-value 0.005) than fathers. In comparison to primiparous fathers, primiparous mothers had significantly higher levels of stress (p-value 0.021) and depression (p-value 0.015). Additionally, compared to the other groups, mothers who had C-sections had a significantly lower tendency to abuse their children infancy (p-value 0.023). This study demonstrated an equal level of parental bonding between mothers and fathers and their children. [68]

Kruthika et al. (2017) conducted research on the prevalence of postpartum depression in mothers in order to pinpoint the causes of depressive symptoms in this population. The current cross-sectional research was carried out between January 2016 and June 2016 in two rural locations with 300 women participating who attended immunization clinics at the Primary Health Center and had a postpartum period of less than three months. Mothers who could have postpartum depression were found using the Edinburgh Postnatal Depression Scale. Scores lower than 13 were seen as indicative of depression. 41 cases (13.6%) of post-natal depression were reported. Age, literacy level, socioeconomic standing, gravidity, newborn's sex, delivery method, and unexpected pregnancies were all strongly linked to postnatal depression prevalence. It was determined that reducing maternal morbidity and unfavorable child outcomes would need early screening of women and counseling of women and their families. [69]

Using data from the Pregnancy Risk Assessment Monitoring System from 2004, 2008, and 2012, Ko et al. (2017) characterized self-reported PDS overall, by reporting state, and by a few chosen sociodemographic characteristics (PRAMS). In 13 states having data for all three time periods, a decrease in the prevalence of PDS was shown from 2004 (14.8%) to 2012 (9.8%) (p 0.01). Eight states had decreases in PDS prevalence that were statistically significant (p 0.05), whereas five states saw no changes at all. The frequency of PDS in all 27 states in 2012 was 11.5%. PDS was maximum among among new mothers that met the following criteria: 1) were under the age of 19 or between the ages of 20 and 24, 2) were of American Indian/Alaska Native or Asian/Pacific Islander race/ethnicity, 3) had less than 12 years of education, 4) were single, 5) smoked after giving birth, 6) had three or more stressful life events in the year prior to giving birth, 7) gave birth to term, low-birthweight infants, and 8) had infants Although the research did not look into the causes of the reduction, it is possible that greater use of antidepressants as well as enhanced prenatal screening and treatment as well as better detection of depression risk factors may have helped to slow the fall. However, further initiatives are required to lower PDS incidence in certain states and female subpopulations. To minimize PDS among American women, ongoing monitoring and initiatives to support adequate screening, referral, and treatment are required. [70]

Ogbo et al. (2018) looked at the causes of prenatal and postnatal depression symptoms in an Australian community that included persons from various cultural and linguistic backgrounds (CALD). Prevalence of depressive symptoms throughout pregnancy and after delivery was 6.2% and 3.3% of the group, respectively. Being from the CALD community, not having a supportive spouse, having a history of intimate partner violence, and having a poor socioeconomic position were all significant risk factors for mother depression symptoms during pregnancy. Postnatal depressed symptoms were significantly correlated with self-reported prenatal depressive symptoms. In addition to assisted delivery, risk variables for postnatal depressed symptoms were identical to those for prenatal depressive symptoms. The

authors came to the conclusion that in New South Wales, Australia, characteristics related to demographic and psychological adversity were linked to future prenatal and postnatal depression symptoms. Ahmad et al. (2018) looked at the connection between PND and intimate partner violence (IPV) in Malaysia. There were 4.4% of people who had probable PND. 4.9% of people worldwide had IPV. 3.7%, 2.6%, and 1.2% of the women in this group suffered emotional, physical, and/or sexual violence, respectively. According to a logit regression study, women who were exposed to IPV had an adjusted OR (aOR) of 2.34, which put them at 2.3 times the chance of developing probable PND. The scientists came to the conclusion that exposure to IPV was strongly linked to possible PND. The ability to recognize and address these issues should be taught to healthcare staff. [72]

In their 2018 study, Mersky and Janczewski CE looked at the prevalence of postpartum depression (PPD) and its correlation with a few demographic variables and prenatal disorders. This research looked at whether prenatal factors mediated the association between ACEs and PPD and if PPD was related with higher exposure to ACEs. Methods 735 low-income women who were getting home visitation services provided the data. Estimates of PPD and its correlates were generated using descriptive and bivariate analyses, and nested path analyses were employed to assess for mediation. In comparison to estimates of prevalence in the general population, it was discovered that PPD rates were high. The sample rates for PPD were greater than the sample rates for prenatal depression. Despite the fact that Hispanic women consistently reported the lowest rates, omnibus analyses showed that PPD did not differ substantially by maternal age or race/ethnicity. The greatest rates were recorded by American Indian women and non-Hispanic white women. PPD and higher ACE exposure were substantially correlated. According to nested path models, three prenatal conditions—intimate partner violence (IPV), perceived stress, and antenatal depression—were partly responsible for the impacts of ACEs. Final Thoughts for Practice Rates of PPD seem to be greater among low-income mothers, which is consistent with earlier findings. ACEs may raise the likelihood of psychological distress and prenatal IPV, both of which may exacerbate PPD. [73]

Modi et al. (2018) investigated the risk variables connected to PPD and its prevalence. A tertiary care hospital's OBGY, Pediatrics, and Psychiatry departments participated in the cross-sectional research. After receiving written informed permission, 250 consecutive women between 1-6 weeks postpartum who visited the aforementioned departments were enrolled. For the correlation of multiple risk indicators, a specifically created semi-structured pro forma was employed. For PPD diagnosis, the Edinburgh Postnatal Depression Scale was employed. This research found that PPD affected 20.4% of the women tested. Age under 30, financial reliance, a positive family history of mental illness and PPD, a prior female child, an unintended pregnancy, pressure to have a boy, problems during pregnancy and delivery are all significant risk factors for PPD. Relationship problems, spouse drug misuse, and domestic violence all raised the risk. It was shown that PPD is quite prevalent in many different civilizations. Risk factor reduction is helpful in PPD primary prevention. [74]

Kerie et al (2018) estimate the prevalence and related variables of postpartum depression among moms who gave delivery during the previous 12 months across hospitals of Southwest Ethiopia, 2017. The survey found that 138 (33.82%) of moms suffered postpartum depression. Postpartum depression was significantly correlated with unintended pregnancy

adjusted odds ratio (AOR) = 4.49, 95% CI (2.31, 8.71), age range of 15 to 24 years adjusted odds ratio (AOR) = 0.420, 95% CI (0.18, 0.98), having a chronic physical illness adjusted odds ratio (AOR) = 7.71, 95% CI (2.34, 25.44), experiencing infant death adjusted odds ratio (AOR) = 4.12, (1.78, 9.5 Postpartum depression was found to be quite common. [75]

In 2016, Fantahun et al. evaluated the incidence and risk factors for postpartum depression among new moms who visited public health facilities in Addis Abeba, Ethiopia. According to the study, mothers had a 23.3% prevalence of postpartum depression. Additionally, it was shown that postpartum depression was more often seen in women who were unmarried, had unexpected pregnancies, gave birth in medical facilities without the presence of any relatives, had a prior history of child health, had a history of drug use, and had poor income. The integration of mental health services and cross-sectoral coordination of women's affairs with healthcare institutions were found to be essential. [76]

In a rural Ethiopian context with substantial socioeconomic adversity and risks to reproductive health, Azale et al. (2018) evaluate postpartum depression (PPD) symptoms and related variables. High PPD symptom prevalence was 12.2%, with a 95% confidence range (CI) of 11.1 to 13.4. 12.0% of those who took part in the research reported suicide thoughts. In univariate analysis, the husband's preference for a male infant was connected to PPD symptoms (crude odds ratio = 1.43) but disappeared after controlling for covariates. The final multivariable analysis revealed that rural residence (adjusted odds ratio (aOR) 2.56), grand multiparity (aOR 2.00), perinatal complications (aOR: 2.55), a history of abortion (aOR 1.50: 1.07, 2.11), experiencing hunger in the previous month (aOR 2.38), lower perceived wealth (aOR 2.11), a poor marital relationship (aOR 2.47), and one or more stressful events in the previous six months (aOR 2.36) The authors came to the conclusion that more than one in ten women in this Ethiopian community experienced PPD symptoms. Threats to reproductive health and social hardship were linked to worse mental health. Interventions targeting underprivileged rural women with limited access to care are required. [77]

In Taiwanese women, Shao et al. (2021) investigated the frequency and determinants of PPD. The use of multivariate analyses allowed the discovery of independent PPD predictors. 18.8% of women who were postpartum at one month had PPD.[78]

Walker et al. (2021) studied the connections between many potential factors in postpartum depression. Greater antepartum depressive symptoms, antepartum anxiety, pregnancy-specific anxiety, unemployment, poor sleep quality, unwanted pregnancy, abuse, multiparity, and congenital anomalies were independently linked with an increased risk of postpartum depression. The primary risk factors for postpartum depression were experiencing antepartum depressive symptoms, having a child with a congenital defect (AOR = 2.33), and being maltreated.[79]

In Vientiane Capital, Lao PDR, Xayyabouapha et al. (2022) investigated the prevalence and risk variables related to postpartum depression symptoms among women following birth. There were 21.3% of individuals who reported having postpartum depression symptoms. AOR: 1.9, 95% CI: 1.1-3.0; receiving moderate social support (AOR: 5.6, 95% CI: 3.2-10.0); experiencing mental health issues during pregnancy (AOR: 3.3, 95% CI: 1.4-7.6); having conflicts with family members (AOR: 2.5, 95% CI: 1.5-4.0); and experiencing intimate partner violence were all associated factors. Primary health care providers must be assisted in acquiring the skills necessary to recognize risk factors and symptoms and to provide the most

basic essential services for postpartum depressive symptoms in settings where access to mental health specialists has been severely restricted for maternal and child healthcare (PDS). The research found that postnatal depression symptoms were present in a significant percentage of women. [80]

In Al-Madinah, Saudi Arabia, the incidence of PPD and the variables associated with it were identified by Alrehaili and Albelowi in 2022. A total of 31.68% of participants had major depression, while 50 (20.57%) had mild depression. The comparative analysis revealed that the earlier kids. The research came to the conclusion that there is a positive correlation between the number of previous children, child health, family support, and financial level. [81]

MATERIALS AND METHODOLOGY

Study Design
The study design will be cohort cross-sectional.

Place and sample frame:
This study will be conducted at SANTOSH MEDICAL COLLEGE AND HOSPITAL, Ghaziabad, Uttar Pradesh and the sample will be taken from patient visiting Obstetrics and Gynecology department.

Study population
Women attending Department of Obstetrics and Gynecology (OBGY) ANC OPD

Sample size
A total of 126 women will be taken for this study.

Sample Size Determination

$$n = \frac{Z2 - \alpha/2\, P(1-P)}{d^2}$$

Z= 1.96 at 5% level of significance
P = Prevalence of (9.18%)
d = absolute error (5%)
n = 128.11

Inclusion criteria
1. Pregnant women with 20 weeks of gestation, as per antenatal records; with informed consent and available for follow up in ANC
2. Pregnant women who have given consent for follow up post delivery , 14 days of delivery till 6 weeks postpartum.
3. Primi and Multi- parous women

Exclusion criteria
1. Women not planning delivery at the hospital where study is undertaken.
2 .Women and caregiver not desiring to take part in the interview.

Methodology
Ethical clearance will be obtained from the Institute's Ethical committee. Permission will be obtained from the Institution. All the participants will be provided with written and informed consent proforma to be signed by them. Those participants who will be giving their consent will be included in the study. Participants will be given instructions for filling the semi-structured proforma and other psychiatric rating scales. Data collected will be entered in

Statistical Package for the Social Sciences (SPSS) sheet according to various categories and SPSS version 24 will be used to analyze the data.

Following psychiatric rating scales will be used for collection of data: -

Hamilton Depression Rating Scale
The Edinburgh Postnatal Depression Scale (EPDS)
Quality of Life Scale (QOLS).

Hamilton Depression Rating Scale

The HDRS (also known as the Ham-D) is the most widely used clinician-administered depression assessment scale
This scale measure the severity of depression , 17 question
Have score suggestive of mild, moderate, severe type
The score are as follows
Normal score : 0- 7
Mild depression : 8-16
Moderate depression : 17-23
Severe depression: > 24

The Edinburgh Postnatal Depression Scale (EPDS)

Edinburgh Postnatal Depression Scale (EPDS) is a valuable and efficient way of identifying patients at risk for "perinatal" depression. The EPDS is easy to administer and has proven to be an effective screening tool.

Quality of Life Scale (QOLS)

This form of the Quality of Life Scale (QOLS) has 16 items rather than the 15 found in the original Flanagan version. Item #16, "Independence, doing for yourself" was added after a qualitative study indicated that the instrument had content validity in chronic illness groups but
that it needed an item that reflected the importance to these people of remaining independent and able to care for themselves.

OBSERVATION AND RESULT

Table 1: Distribution of study population according to

		Frequency	Percent
Education	Illiterate	14	11.0%
	Primary	59	46.5%
	Higher secondary	31	24.4%
	Graduate	21	16.5%
	Postgraduate	2	1.6%
Occupation	Employed	29	22.8%
	Unemployed	98	77.2%
Husband's education	Illiterate	12	9.5%
	Primary	32	25.2%
	Higher secondary	30	23.6%
	Graduate	47	37.0%
	Postgraduate	6	4.7%
Husband's occupation	Professional	4	3.1%
	Self employed	37	29.1%
	Skilled	60	47.2%
	Skilled, self employed	4	3.1%
	Unemployed	4	3.1%
	Unskilled	18	14.2%
Family	Joint	50	39.4%
	Nuclear	77	60.6%

Majority (46.5%) of the subjects had primary level of education and were Unemployed (77.2%). Joint family was reported among 39.4% and Nuclear family among 60.6% subjects.

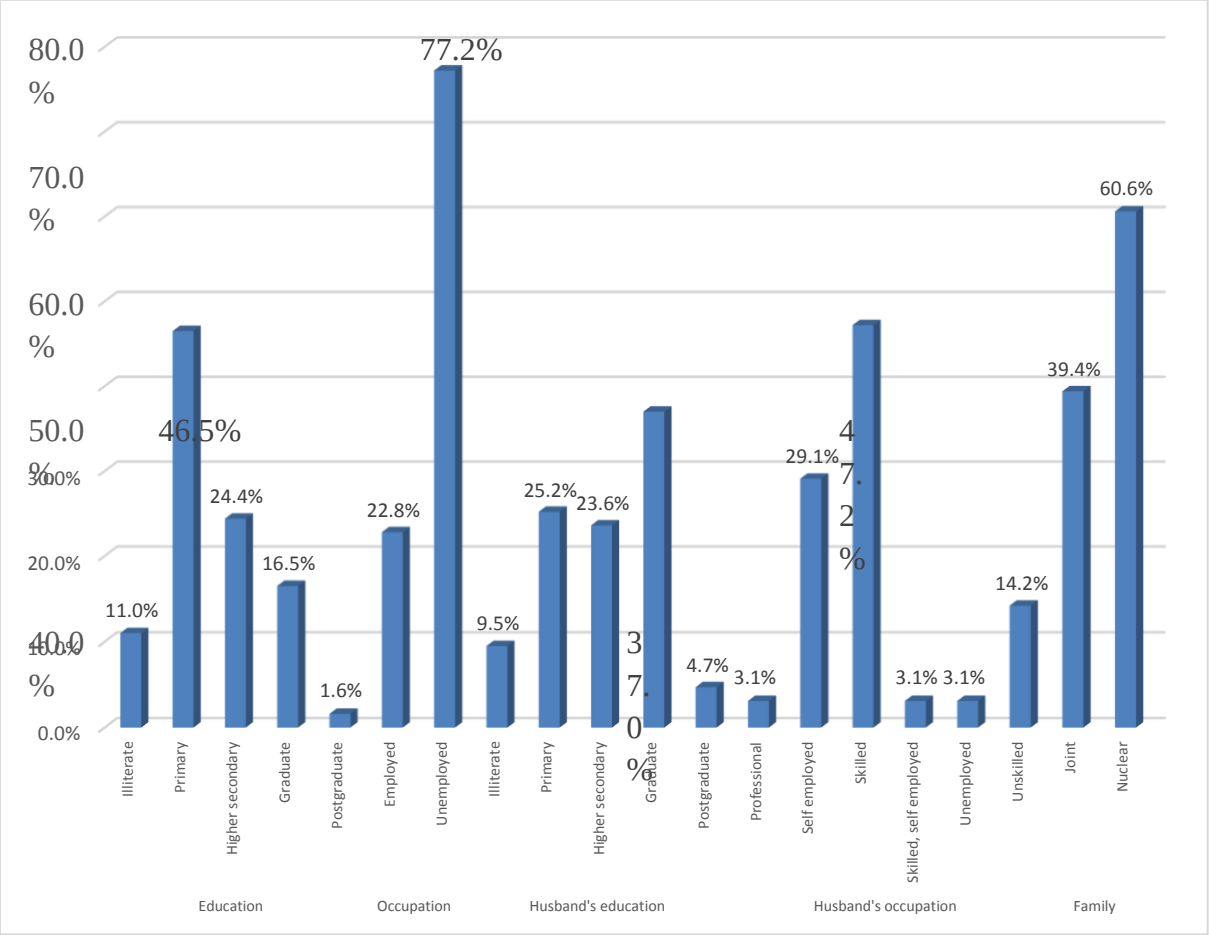

80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
11.0%
46.5%
24.4%
16.5%
1.6%
22.8%
77.2%
9.5%
25.2%
23.6%
37.0%
4.7%
3.1%
29.1%
47.2%
3.1%
3.1%
14.2%
39.4%
60.6%
Illiterate
Primary
Higher secondary
Graduate
Postgraduate
Employed
Unemployed
Illiterate
Primary
Higher secondary
Graduate
Postgraduate
Professional
Self employed
Skilled
Skilled, self employed
Unemployed
Unskilled
Joint
Nuclear
Education
Occupation
Husband's education
Husband's occupation
Family

Table 2: Distribution of study population according to

		Frequency	Percent
Financial Debt	No	97	76.4%
	Yes	30	23.6%
Husband Substance Abuse	No	106	83.5%
	Yes	21	16.5%
Marital Status	Married	123	96.9%
	Separated	1	0.8%
	Unmarried	2	1.6%
	Widowed	1	0.8%
Marital Relationship	Fair	49	38.6%
	Good	72	56.7%
	Poor	6	4.7%
Separation Due to Conflict	No	119	93.7%
	Yes	8	6.3%

Financial Debt was present among 23.6%, Husband Substance Abuse among 16.5%, Marital Status was married among 96.9%, Unmarried among 1.6%, Separated and Widowed among 1 (0.8%) subject each. Marital Relationship was Fair, Good and Poor among 38.6%, 56.7% and 4.7% subjects respectively. Separation Due to Conflict was present among 6.3% subjects.

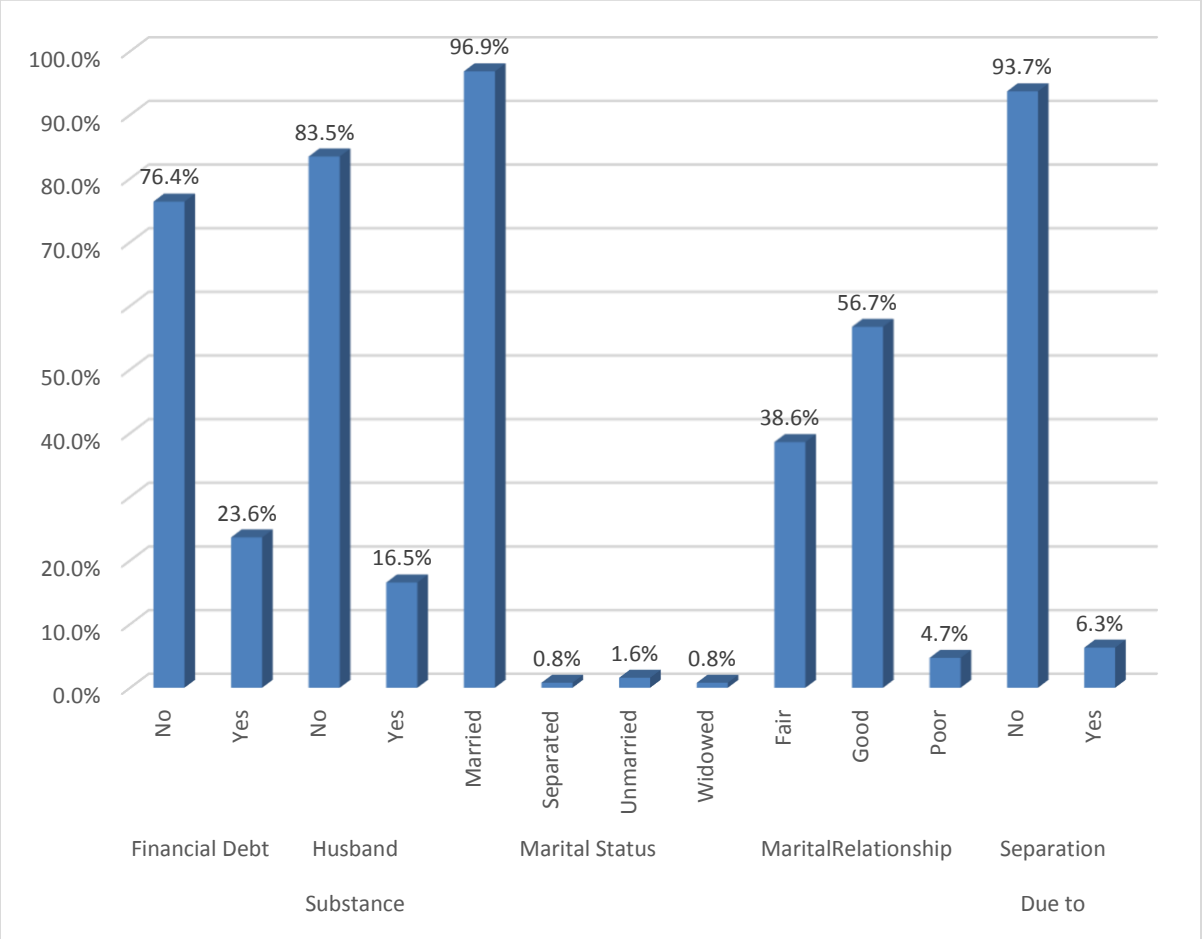

100.0%
90.0%
80.0%
70.0%
50.0%
40.0%
20.0%
10.0%
0.0%
76.4%
23.6%
83.5%
16.5%
96.9%
0.8%
1.6%
0.8%
38.6%
56.7%
4.7%
93.7%
6.3%
No
Yes
No
Yes
Married
Separated
Unmarried
Widowed
Fair
Good
Poor
No
Yes
Financial Debt
Husband Substance
Marital Status
MaritalRelationship
Separation Due to

Table 3: Distribution of study population according to

		Frequency	Percent
No. of Living children	None	42	33.1%
	1	49	38.6%
	2	24	18.9%
	3	10	7.9%
	4	1	0.8%
	5	1	0.8%
Gender of Living children	None	42	33.1%
	Male	44	34.6%
	Female	41	32.3%

No. of Living children was None among 33.1%, 1 among 38.6%, 2 among 18.9%, 3 among 7.9%, 4 and 5 among 1 (0.8%) subject each.

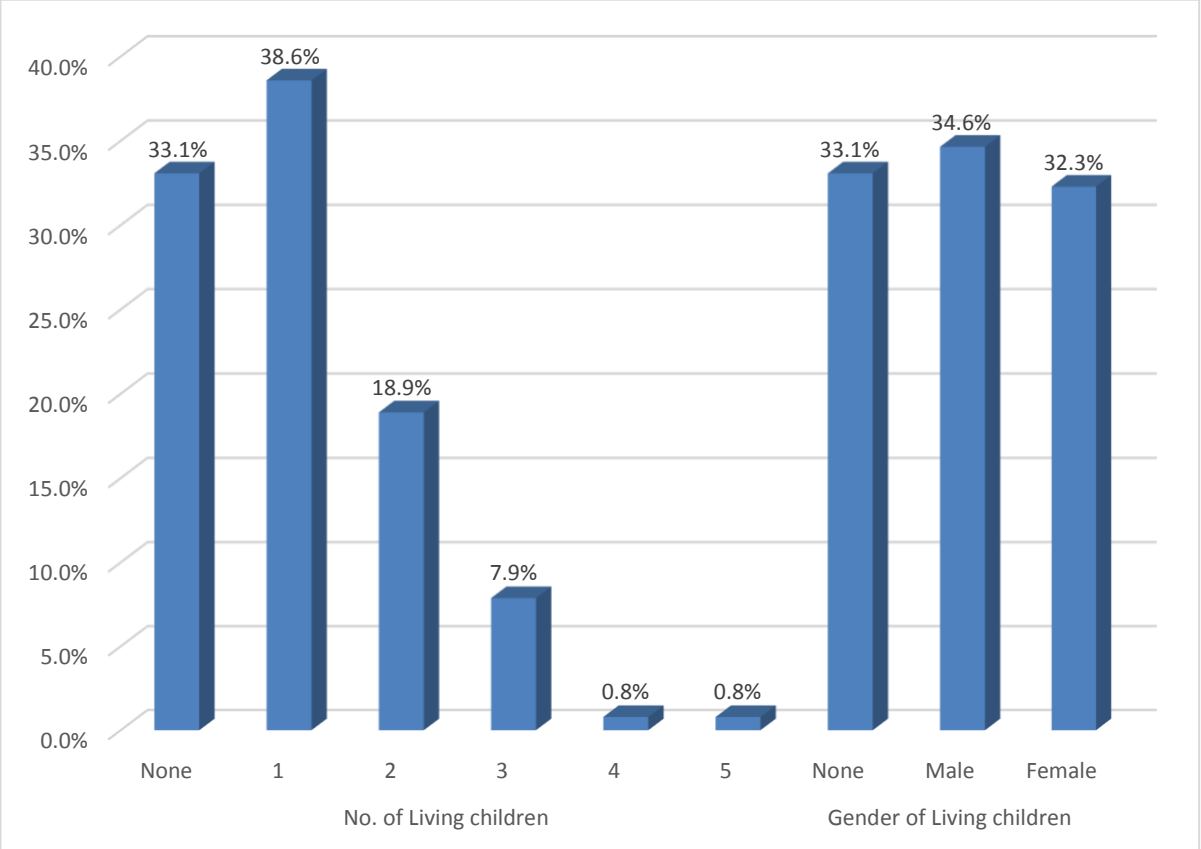

40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
33.1%
38.6%
18.9%
7.9%
0.8%
0.8%
33.1%
34.6%
32.3%
None
1
2
3
4
5
None
Male
Female
No. of Living children
Gender of Living children

Table 4: Distribution of study population according to

		Frequency	Percent
Past medical history	None	104	81.9 %
	Anemia	13	10.2 %
	COPD	1	0.8%
	DM	2	1.6%
	Hypertension	3	2.4%
	Tuberculosis	1	0.8%
	Thyroid dysfunction	3	2.4%
Past h/o psychiatric Illness	No	123	96.9 %
	Yes	4	3.1%
Past h/o psychiatric illness if yes h/o treatment	No	48	37.8 %
	Yes	79	62.2 %
H/o previous psychiatric hospitalization	No	123	96.9 %
	Yes	4	3.1%

Past medical history showed Anemia among 10.2%, DM among 1.6%, Hypertension among 2.4%, Thyroid dysfunction among 2.4%, COPD and Tuberculosis among 1 (0.8%) subject each.

Past h/o psychiatric illness was present among 3.1%, Past h/o psychiatric illness if yes h/o treatment among 62.2% and H/o previous psychiatric hospitalization among 3.1% subjects.

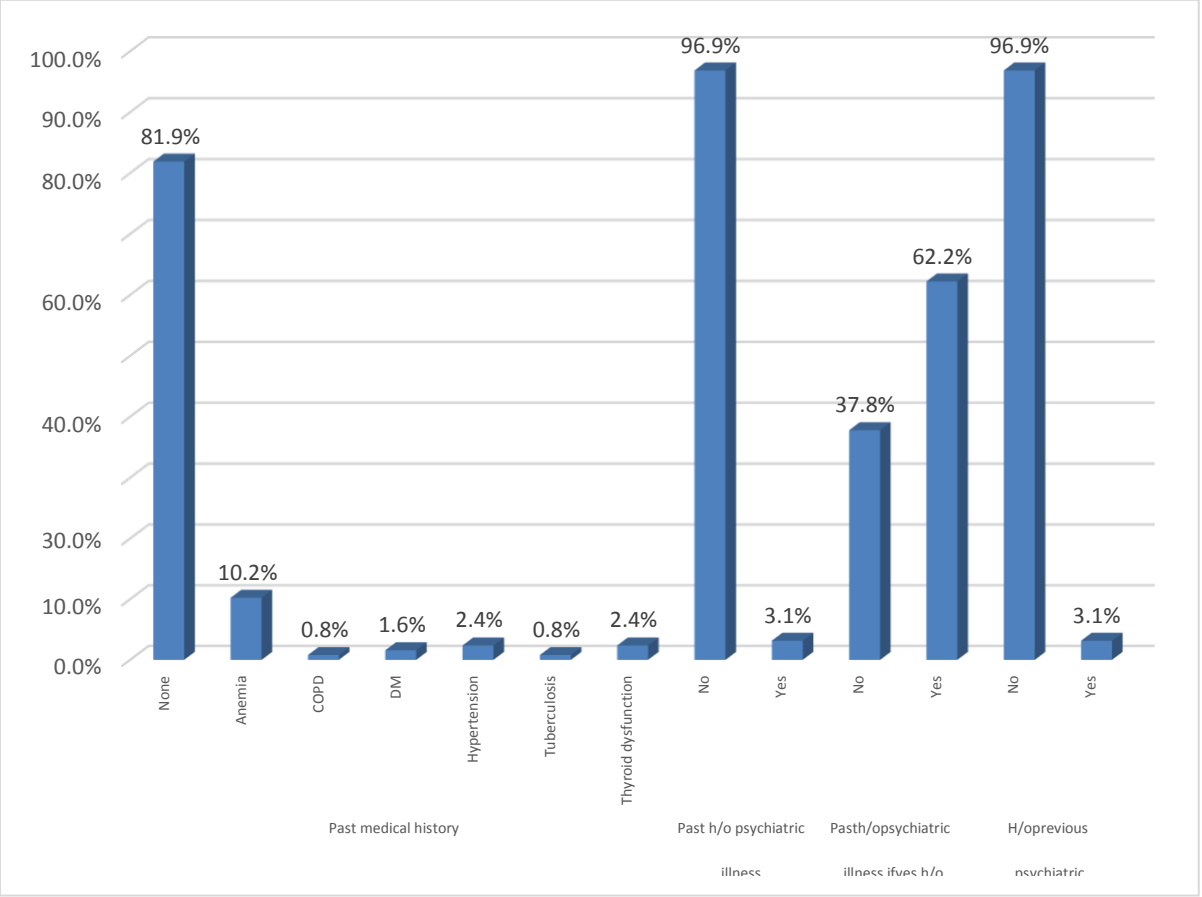
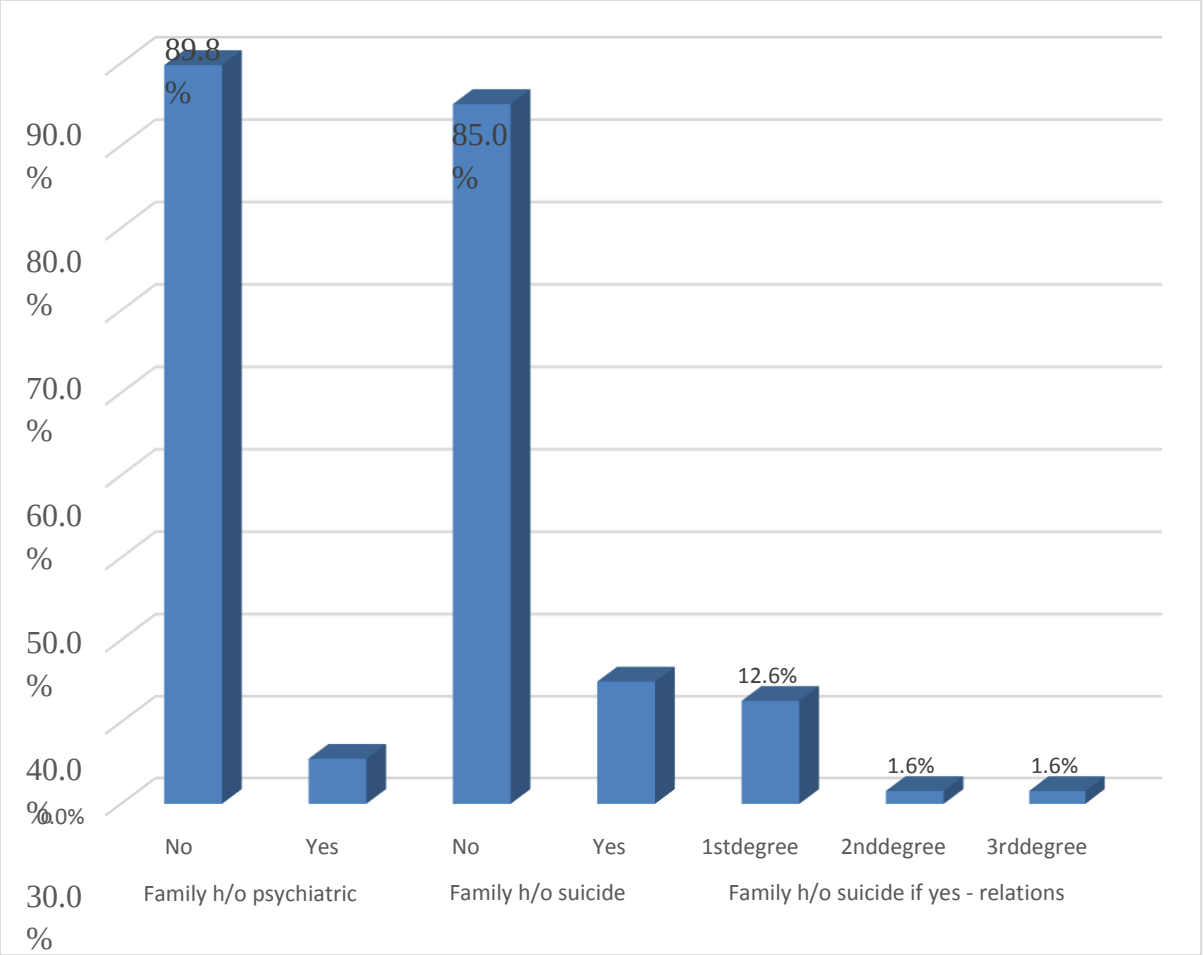

100.0%
90.0%
80.0%
60.0%
40.0%
30.0%
10.0%
0.0%
81.9%
10.2%
0.8%
1.6%
2.4%
0.8%
2.4%
96.9%
3.1%
37.8%
62.2%
96.9%
3.1%
None
Anemia
COPD
DM
Hypertension
Tuberculosis
Thyroid dysfunction
No
Yes
No
Yes
No
Yes
Past medical history
Past h/o psychiatric illness
Pasth/opsychiatric illness ifyes h/o
H/oprevious psychiatric

Table 5: Distribution of study population according to

		Frequency	Percent
Family h/o psychiatric illness	No	114	89.8%
	Yes	7	5.5%
Family h/o suicide	No	108	85.0%
	Yes	19	15.0%
Family h/o suicide if yes - relations	1st degree	16	12.6%
	2nd degree	2	1.6%
	3rd degree	2	1.6%

Family h/o psychiatric illness was present among 5.5%, Family h/o suicide among 15.0% and Family h/o suicide among relations of 1st degree among 12.6%, 2nd degree among 1.6% and 3rd degree among 1.6% subjects.


89.8 %
85.0 %
12.6%
1.6%
1.6%
0.0%
90.0 %
80.0 %
70.0 %
60.0 %
50.0 %
40.0 %
30.0 %
20.0 %
10.0 %
No
Yes
No
Yes
1stdegree
2nddegree
3rddegree
Family h/o psychiatric
Family h/o suicide
Family h/o suicide if yes - relations

15 .0 %

5.5 %

Table 6: Distribution of study population according to

		Frequency	Percent
Obstetric history **Parity**	Multi	64	50.4 %
	Prima	63	49.6 %
Current pregnancy care given by	Both	76	59.8 %
	Husband	35	27.6 %
	Parents	16	12.6 %
H/o infertility	No	124	97.6 %
	Yes	3	2.4%
Pregnancy	Planned	97	76.4 %
	Unplanned	29	22.8 %
	Unwanted	1	0.8%
Previous h/o abortion/ IUD/ SB/ loss of child/ preterm	No	105	82.7 %
	Yes	22	17.3 %
Pregnancy	High Risk	6	4.7%
	Normal Risk	121	95.3 %

Obstetric history – parity showed primipara among 49.6% and multipara among 50.4% subjects.
Current pregnancy care given by Both, Husband and Parents by 59.8%, 27.6% and 12.6% subjects respectively.
H/o infertility was present among 2.4% subjects.

Pregnancy was Planned, Unplanned and Unwanted among 76.4%, 22.8% and 0.8% subjects respectively.
Previous h/o abortion/ IUD/ SB/ loss of child/ preterm was present among 17.3% subjects.

Pregnancy was high risk among 4.7% and Normal among 95.3%.

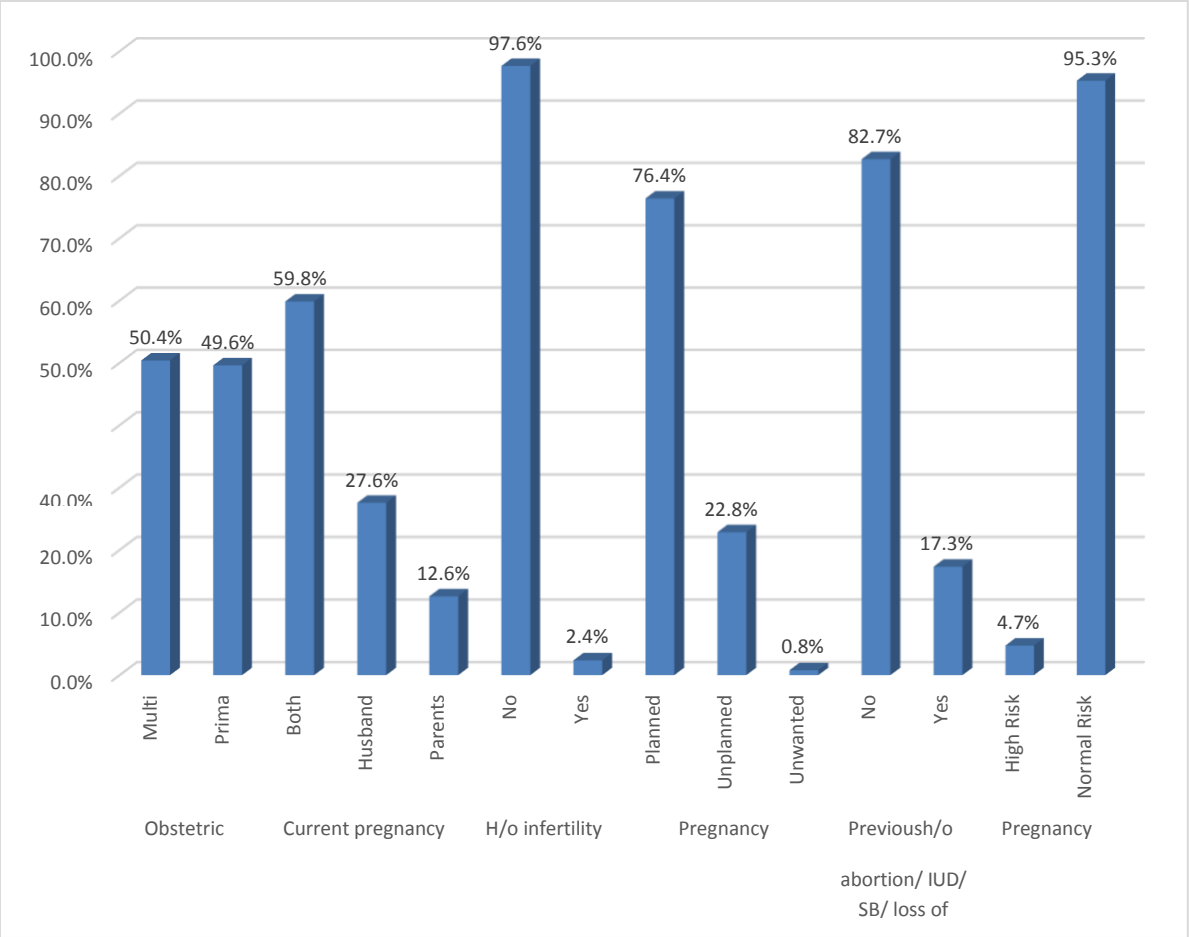


Table 7: Distribution of study population according to

		Frequency	Percent
Having regular check Up	No	20	15.7 %
	Yes	107	84.3 %
Access for periodic Care	No	22	17.3 %
	Yes	105	82.7 %
Significant stressful life events during pregnancy in friends/relatives	No	106	83.5 %
	Yes	21	16.5 %
Postnatal questionnaire	N/a	126	99.2 %
	Father expired 5 days Back	1	0.8%
Delivery mode	N/a	51	40.2 %
	Instrumental	3	2.4%
	LSCS	41	32.3 %
	Normal delivery	32	25.2 %
Sex of child	N/a	52	40.9 %
	Male	43	33.9 %
	Female	32	25.2 %
Wt -neonatal problems	N/a	56	44.1 %
	No	62	48.8 %
	Yes	9	7.1%
Postpartum		73	57.5

			%

complication	Anemia	12	9.4%
	Fever	10	7.9%
	Others	32	25.2 %

Having regular check-up were reported by 84.3%. Access for periodic care was present among 82.7%

Significant stressful life events during pregnancy in friends/relatives were reported by 16.5%.

Wt -neonatal problems were present among 7.1%

Postpartum complications were present among 42.5% subjects.

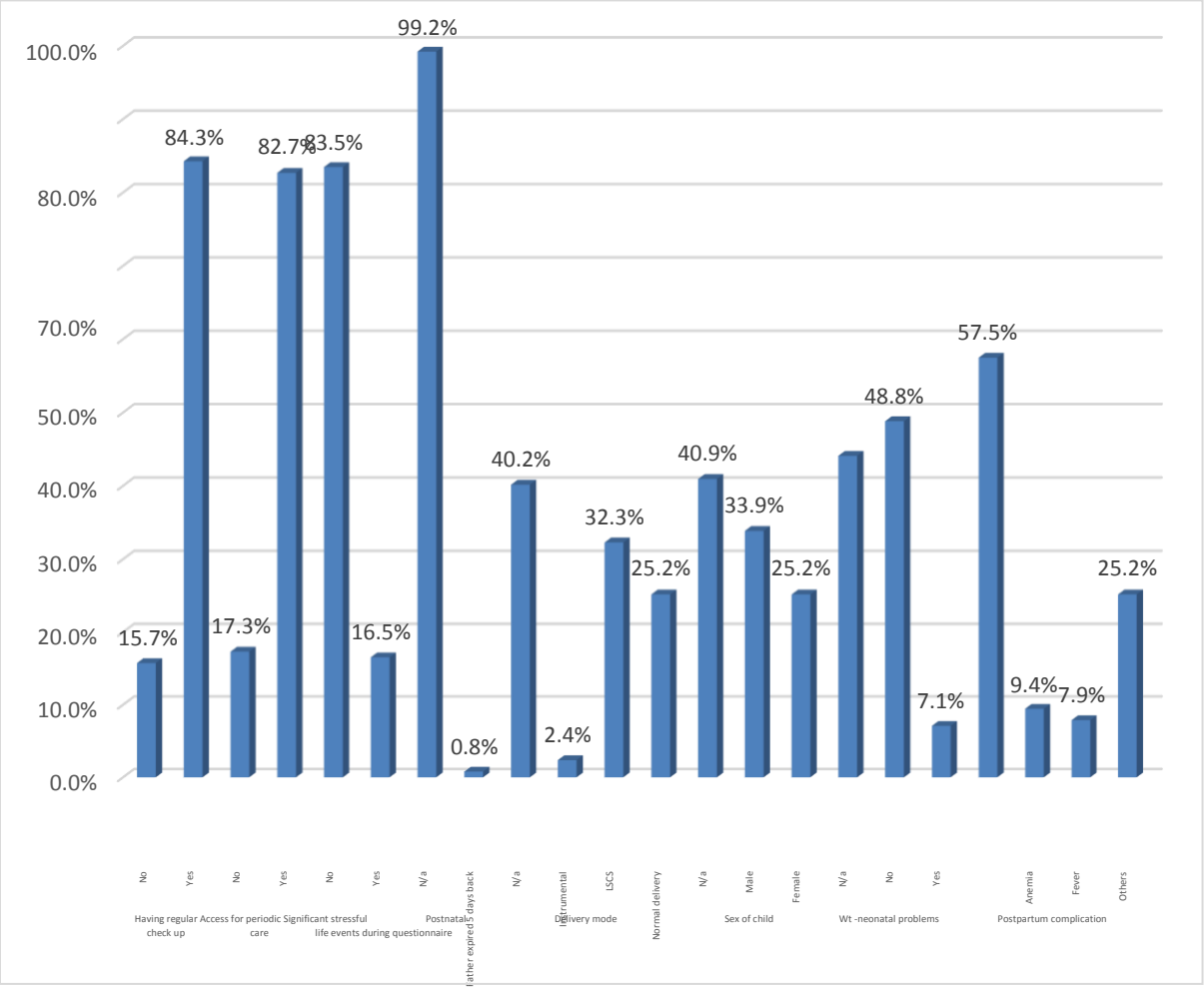


Table 8: Distribution of study population according to

		Frequency	Percent
Breast feeding [breast feeding at any time during postpartum]	N/A	75	59.1 %
	No	9	7.1%
	Yes	43	33.9 %
Breast feeding [use of formula feeds]	N/A	66	52.0 %
	No	21	16.5 %
	Yes	40	31.5 %
Breast feeding [satisfied with breast feeding]	N/A	69	54.3 %
	No	8	6.3%
	Yes	50	39.4 %

Breast feeding [breast feeding at any time during postpartum], Breast feeding [use of formula feeds] and Breast feeding [satisfied with breast feeding] was reported among 33.9%, 31.5% and 39.4% subjects respectively.

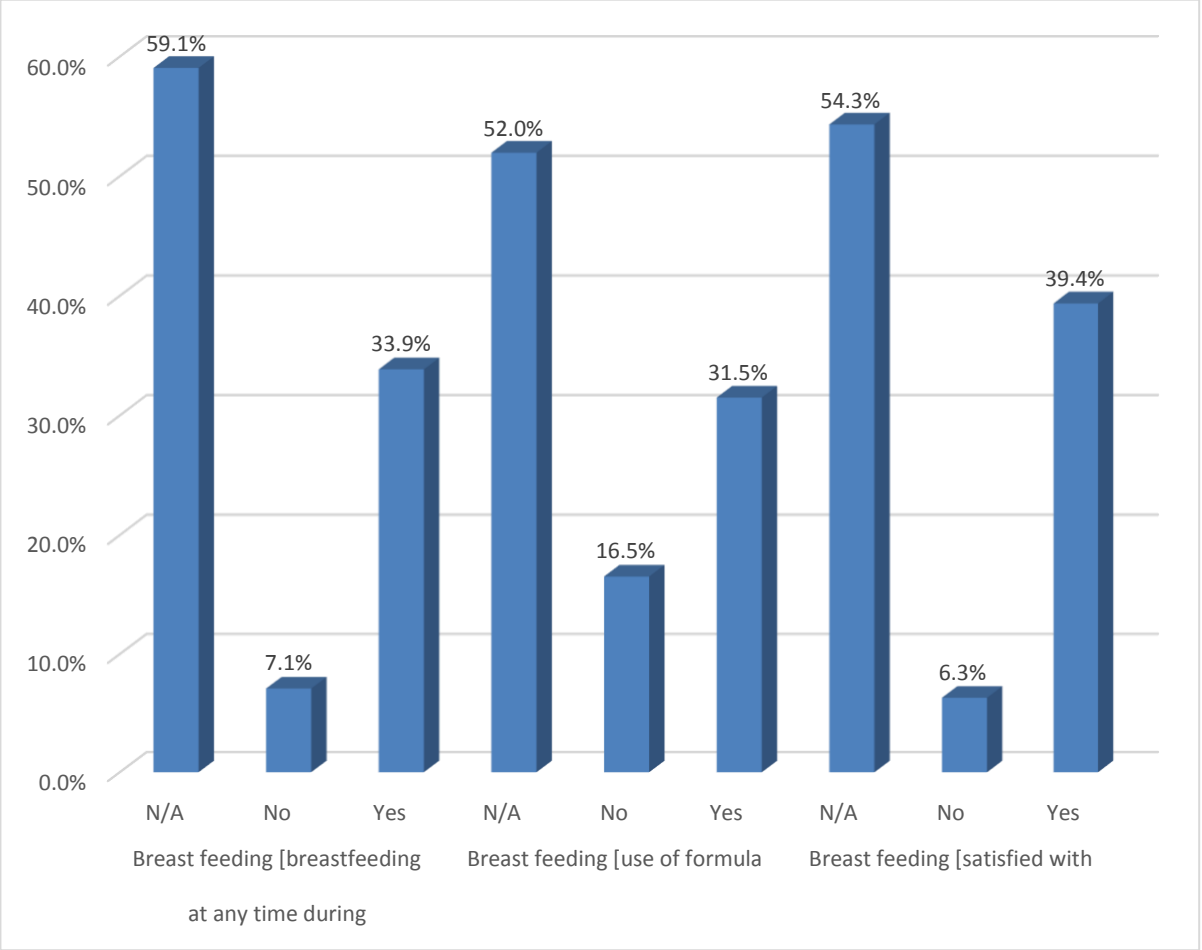
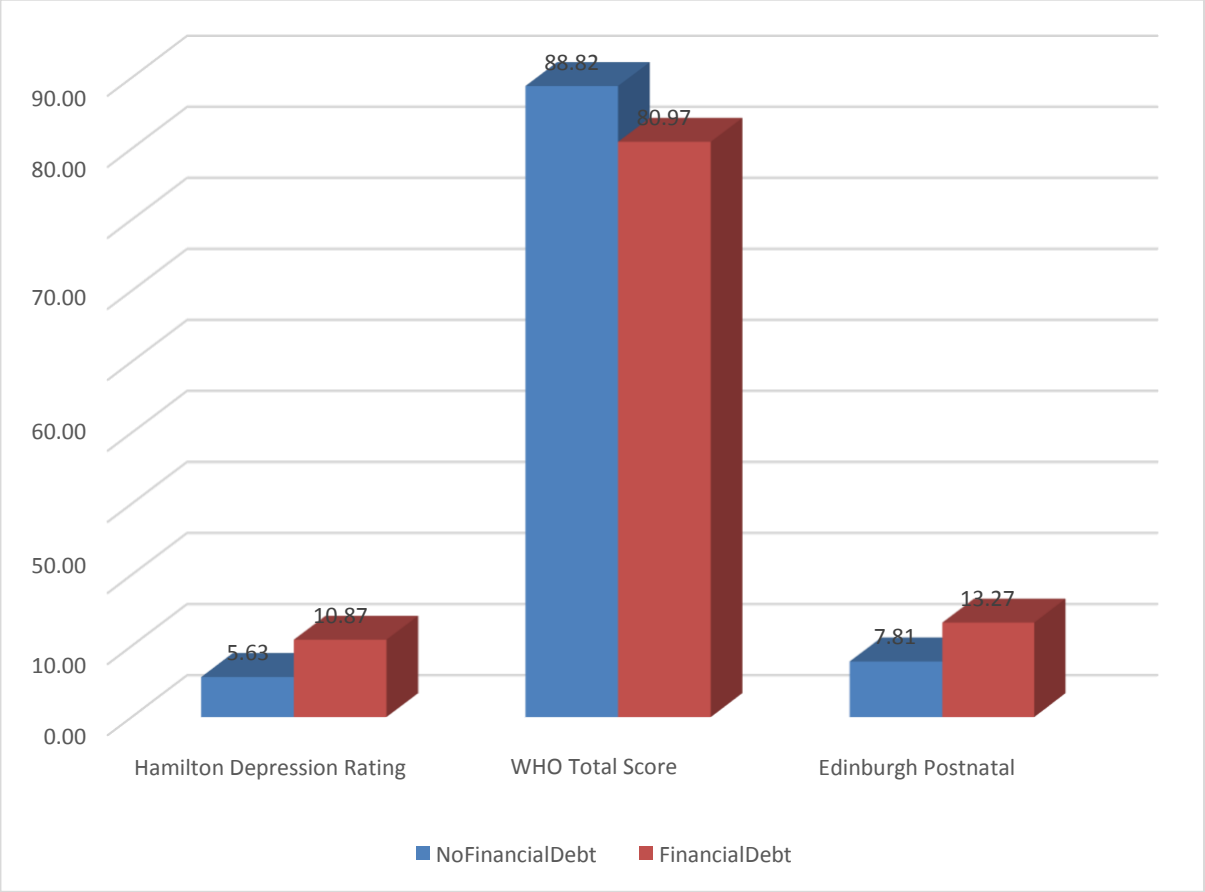

60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
59.1%
7.1%
33.9%
52.0%
16.5%
31.5%
54.3%
6.3%
39.4%
N/A
No
Yes
N/A
No
Yes
N/A
No
Yes
Breast feeding [breastfeeding at any time during
Breast feeding [use of formula
Breast feeding [satisfied with

Table 9: Distribution of study population according to

	Financial Debt	Mean	Std. Deviation	t-test value	p-value
Hamilton Depression Rating Scale score	No	5.63	6.24	-3.644	0.001*
	Yes	10.87			
WHO Total Score	No	88.82	12.10	3.198	0.002*
	Yes	80.97			
Edinburgh Postnatal Depression Scale score	No	7.81	6.17	-3.845	0.001*
	Yes	13.27			

The mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score was compared between subjects with and without Financial Debt using the unpaired t-test. The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among subjects with Financial Debt. The mean WHO Total Score was significantly more among subjects without Financial Debt.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80.00
70.00
60.00
50.00
10.00
0.00
88.82
80.97
10.87
5.63
7.81
13.27
Hamilton Depression Rating
WHO Total Score
Edinburgh Postnatal
NoFinancialDebt
FinancialDebt

Table 10: Distribution of study population according to

	Husband Substance Abuse	Mean	Std. Deviation	t-test value	p-value
Hamilton Depression Rating Scale score	No	6.29	6.91	-2.040	0.043*
	Yes	9.76	8.12		
WHO Total Score	No	88.22	11.87	2.655	0.009*
	Yes	80.67	12.07		
Edinburgh Postnatal Depression Scale score	No	8.41	6.20	-2.319	0.022*
	Yes	12.40	5.87		

The mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score was compared between subjects with and without Husband Substance Abuse using the unpaired t-test. The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among subjects with Husband Substance Abuse. The mean WHO Total Score was significantly more among subjects without Husband Substance Abuse.

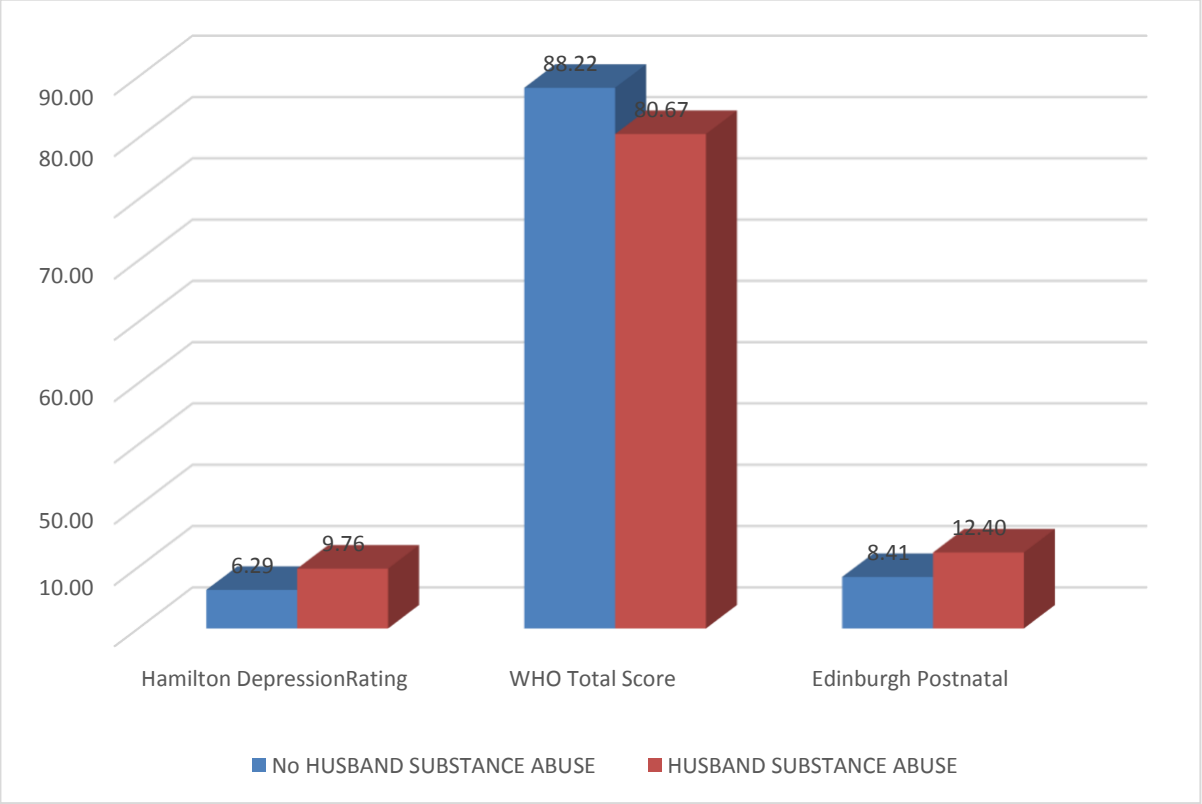
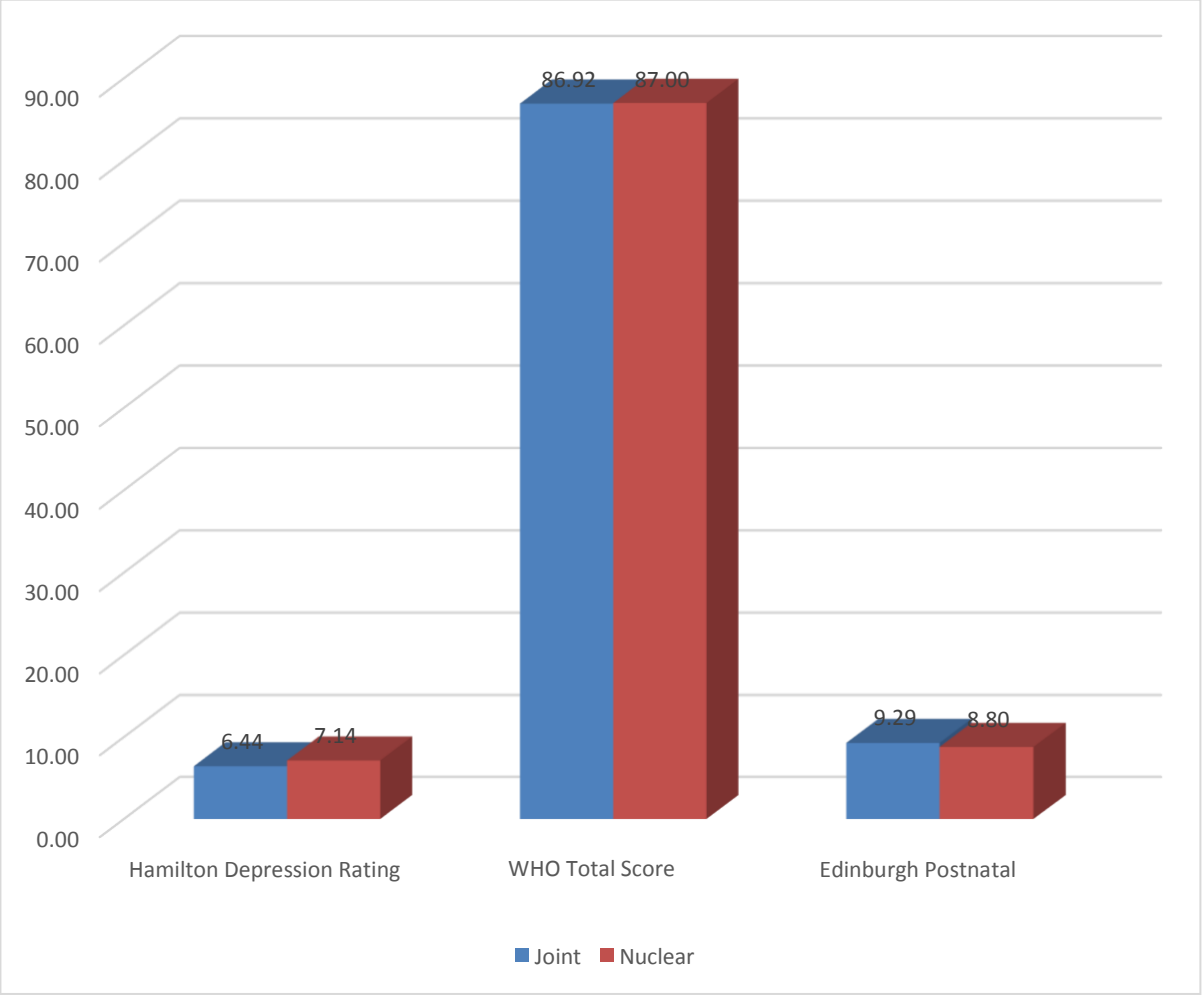

90.00
80.00
70.00
60.00
50.00
10.00
6.29
9.76
88.22
80.67
8.41
12.40
Hamilton DepressionRating
WHO Total Score
Edinburgh Postnatal
No HUSBAND SUBSTANCE ABUSE
HUSBAND SUBSTANCE ABUSE

Table 11: Distribution of study population according to

	Family	Mean	Std. Deviation	t-test value	p-value
Hamilton Depression Rating Scale score	Joint	6.44	6.81	-0.535	0.593
	Nuclear	7.14	7.49		
WHO Total Score	Joint	86.92	11.18	-0.036	0.971
	Nuclear	87.00	12.87		
Edinburgh Postnatal Depression Scale score	Joint	9.29	5.79	0.384	0.702
	Nuclear	8.80	6.66		

The mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score was compared between Joint and Nuclear family using the unpaired t-test. There was no significant difference in mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score between Joint and Nuclear family.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80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
6.44
7.14
86.92
87.00
9.29
8.80
Hamilton Depression Rating
WHO Total Score
Edinburgh Postnatal
Joint
Nuclear

Table 12: Distribution of study population according to

	Past Medical History	Mean	Std. Deviation	t-test value	p-value
Hamilton Depression Rating Scale score	No	6.46	7.26	-1.349	0.180
	Yes	8.70	6.84		
WHO Total Score	No	87.40	11.23	0.855	0.394
	Yes	85.00	15.98		
Edinburgh Postnatal Depression Scale score	No	8.81	6.20	-0.675	0.501
	Yes	9.94	6.81		

The mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score was compared between subjects with and without Past Medical History using the unpaired t-test. The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among subjects with Past Medical History. The mean WHO Total Score was significantly more among subjects without Past Medical History.

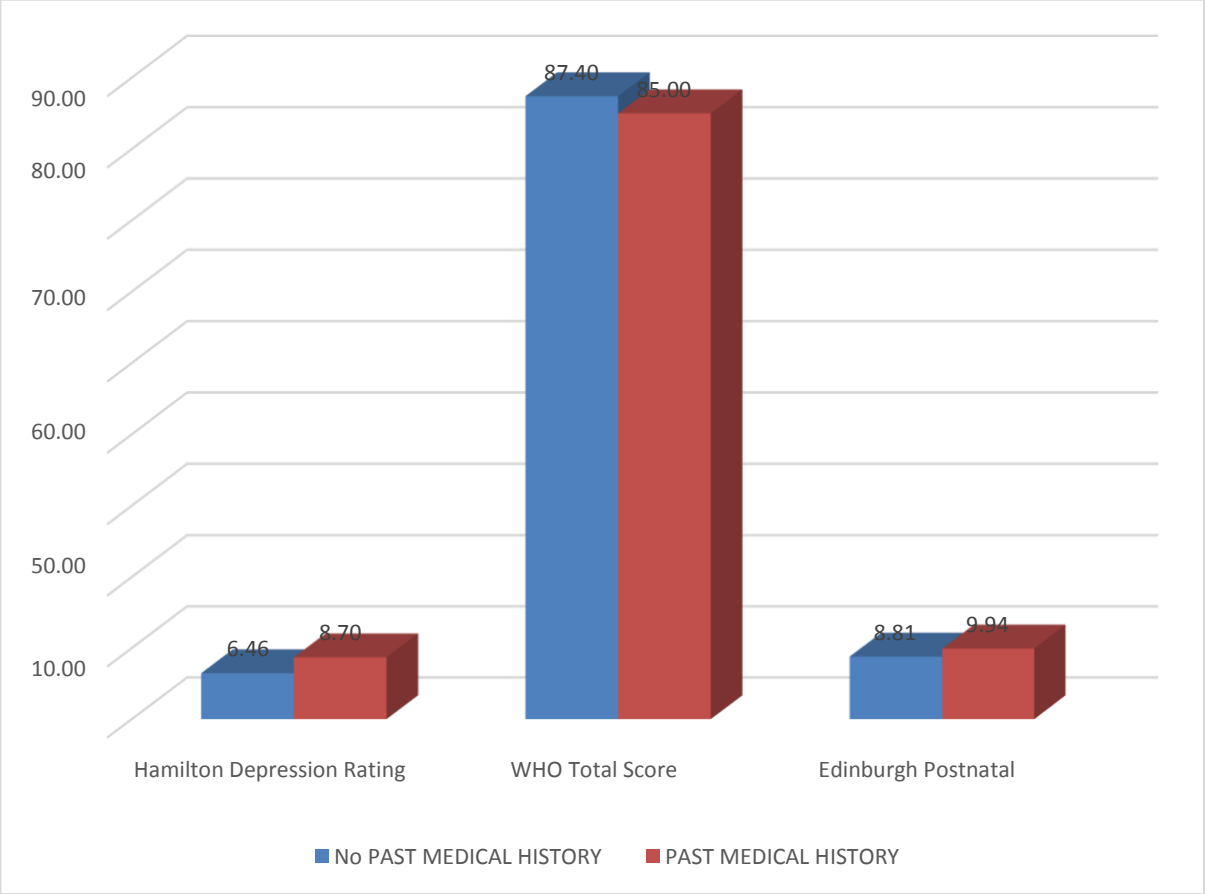

90.00
80.00
70.00
60.00
50.00
10.00
87.40
85.00
6.46
8.70
8.81
9.94
Hamilton Depression Rating
WHO Total Score
Edinburgh Postnatal
No PAST MEDICAL HISTORY
PAST MEDICAL HISTORY

Table 13: Distribution of study population according to

	Past H/O Psychiatric Illness	Mean	Std. Deviation	t-test value	p-value
Hamilton Depression Rating Scale score	No	6.69	7.02	-1.526	0.130
	Yes	12.25	11.84		
WHO Total Score	No	87.52	11.91	2.913	0.004*
	Yes	70.00	8.29		
Edinburgh Postnatal Depression Scale score	No	8.84	6.25	-1.303	0.196
	Yes	13.00	6.68		

The mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score was compared between subjects with and without Past H/O Psychiatric Illness using the unpaired t-test. The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among subjects with Past H/O Psychiatric Illness. The mean WHO Total Score was significantly more among subjects without Past H/O Psychiatric Illness.

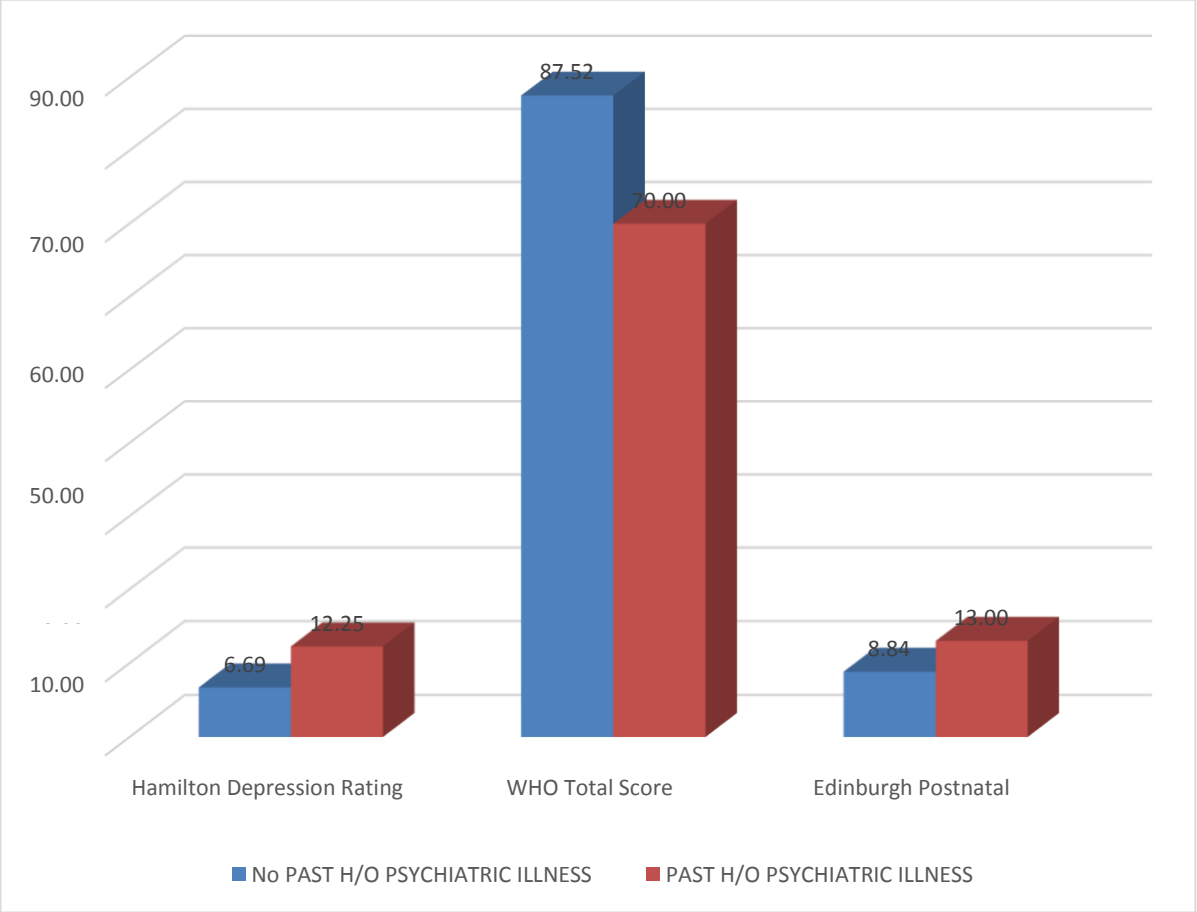

90.00
70.00
60.00
50.00
10.00
87.52
70.00
6.69
12.25
8.84
13.00
Hamilton Depression Rating
WHO Total Score
Edinburgh Postnatal
No PAST H/O PSYCHIATRIC ILLNESS
PAST H/O PSYCHIATRIC ILLNESS

Table 14: Distribution of study population according to

	H/o previous psychiatric hospitalization	Mean	Std. Deviation	t-test value	p-value
Hamilton Depression Rating Scale score	No	6.69	7.10	-2.003	0.047*
	Yes	14.00	9.76		
WHO Total Score	No	87.62	11.75	2.092	0.039*
	Yes	75.00	15.77		
Edinburgh Postnatal Depression Scale score	No	8.71	6.22	-1.675	0.097
	Yes	14.00	4.97		

The mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score was compared between subjects with and without H/o previous psychiatric hospitalization using the unpaired t-test. The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among subjects with H/o previous psychiatric hospitalization. The mean WHO Total Score was significantly more among subjects without H/o previous psychiatric hospitalization.

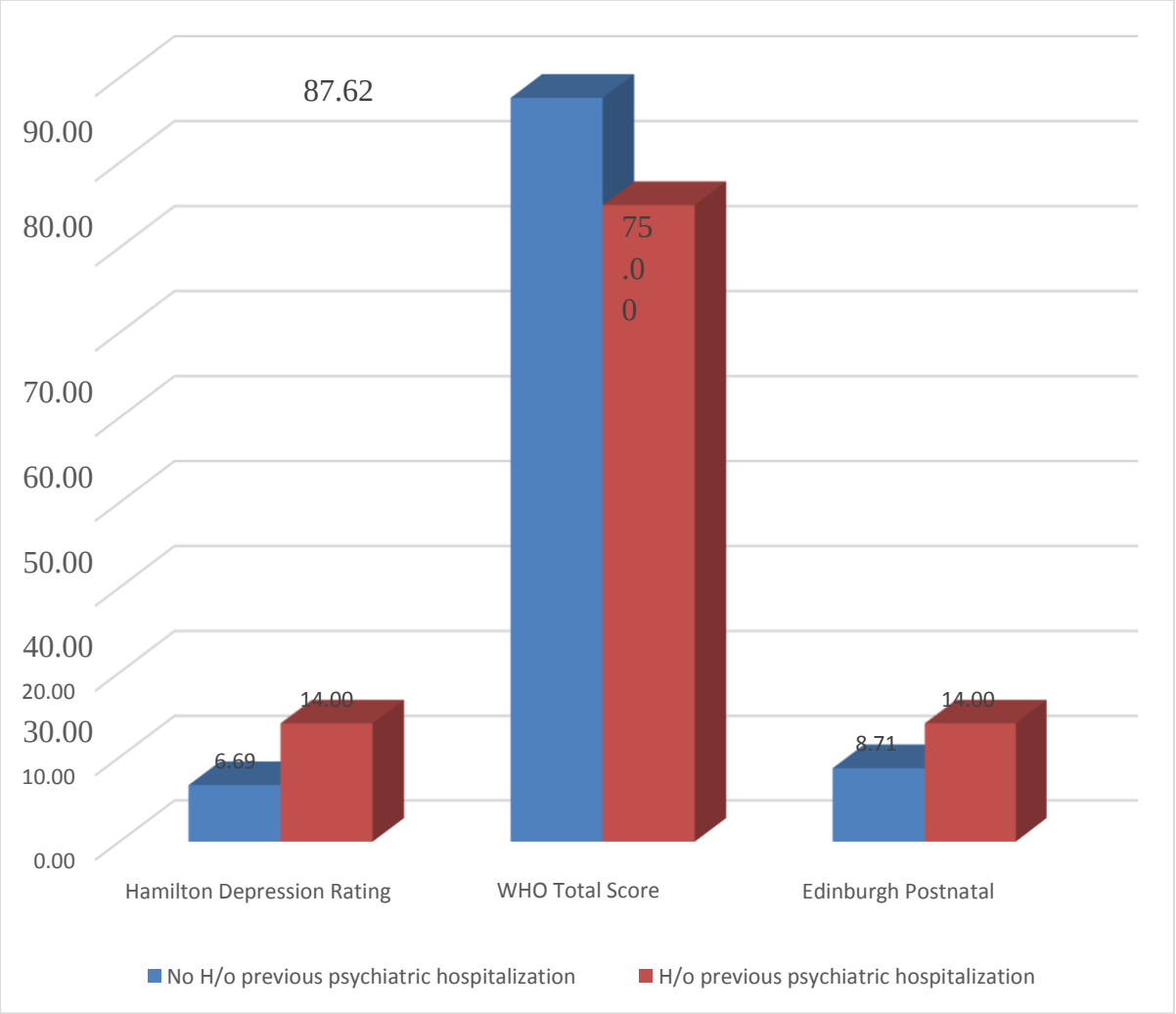
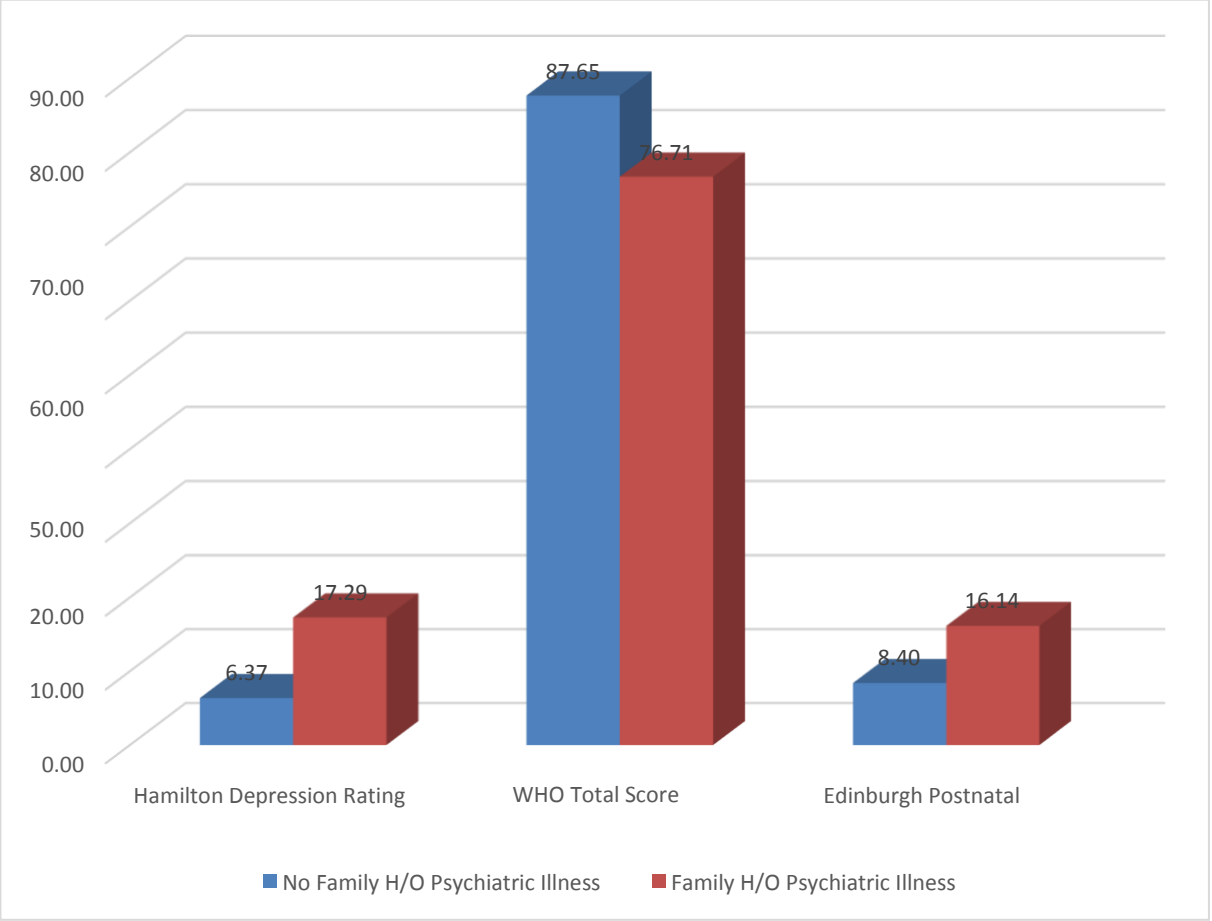

87.62
75
.0
0
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
14.00
6.69
14.00
8.71
Hamilton Depression Rating
WHO Total Score
Edinburgh Postnatal
No H/o previous psychiatric hospitalization
H/o previous psychiatric hospitalization

Table 15: Distribution of study population according to

	Family H/O Psychiatric Illness	Mean	Std. Deviation	t-test value	p-value
Hamilton Depression Rating Scale score	No	6.37	6.71	-4.099	0.001*
	Yes	17.29	8.94		
WHO Total Score	No	87.65	12.02	2.341	0.021*
	Yes	76.71	11.46		
Edinburgh Postnatal Depression Scale score	No	8.40	6.04	-3.311	0.001*
	Yes	16.14	4.67		

The mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score was compared between subjects with and without Family H/O Psychiatric Illness using the unpaired t-test. The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among subjects with Family H/O Psychiatric Illness. The mean WHO Total Score was significantly more among subjects without Family H/O Psychiatric Illness.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80.00
70.00
60.00
50.00
20.00
10.00
0.00
87.65
76.71
17.29
16.14
6.37
8.40
Hamilton Depression Rating
WHO Total Score
Edinburgh Postnatal
No Family H/O Psychiatric Illness
Family H/O Psychiatric Illness

Table 16: Distribution of study population according to

	Family H/O Suicide	Mean	Std. Deviation	t-test value	p-value
Hamilton Depression Rating Scale score	No	6.61	7.06	-1.803	0.047 *
	Yes	12.00	9.01		
WHO Total Score	No	87.34	11.96	1.546	0.125
	Yes	79.50	15.55		
Edinburgh Postnatal Depression Scale score	No	8.67	6.27	-2.111	0.037 *
	Yes	14.17	4.17		

The mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score was compared between subjects with and without Family H/O Suicide using the unpaired t-test. The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among subjects with Family H/O Suicide.

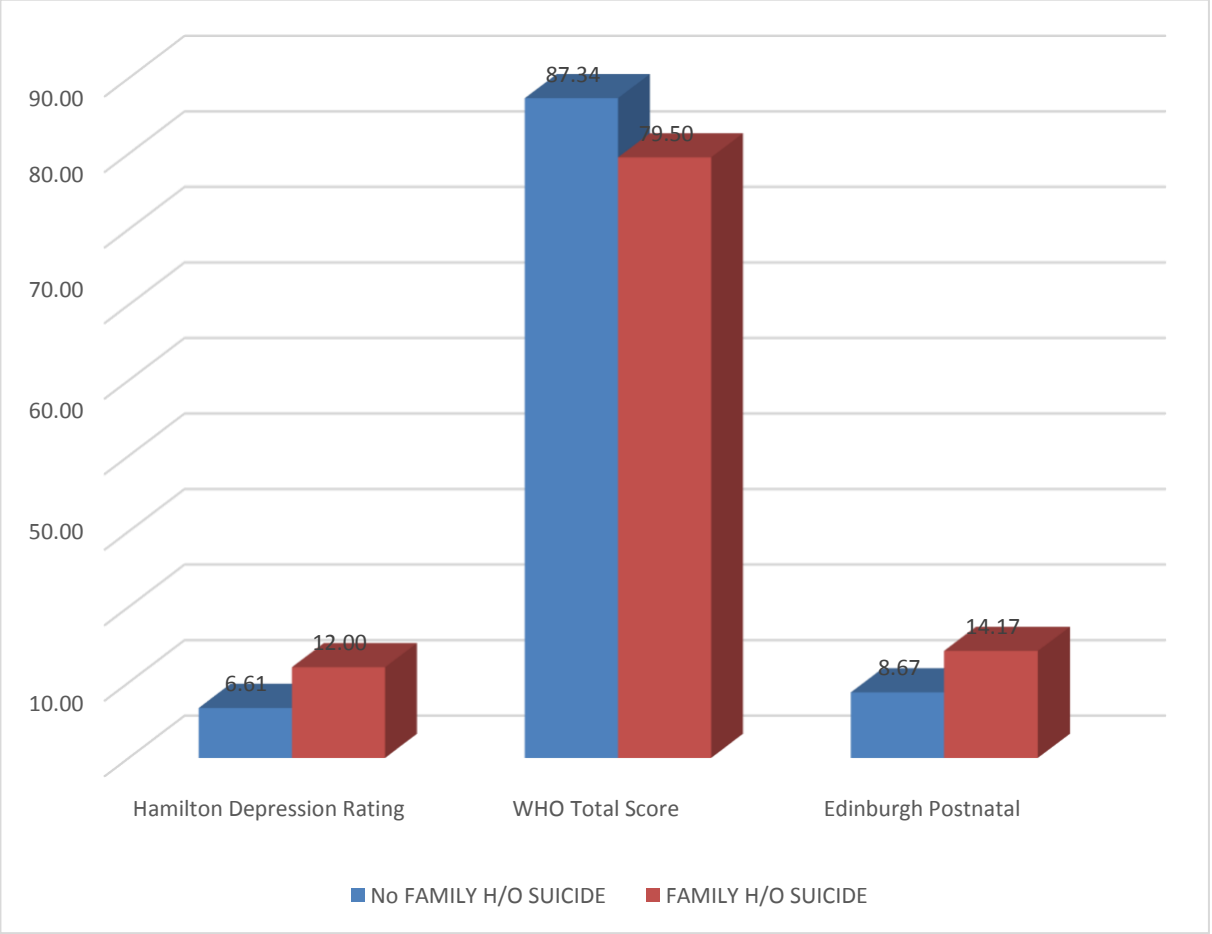
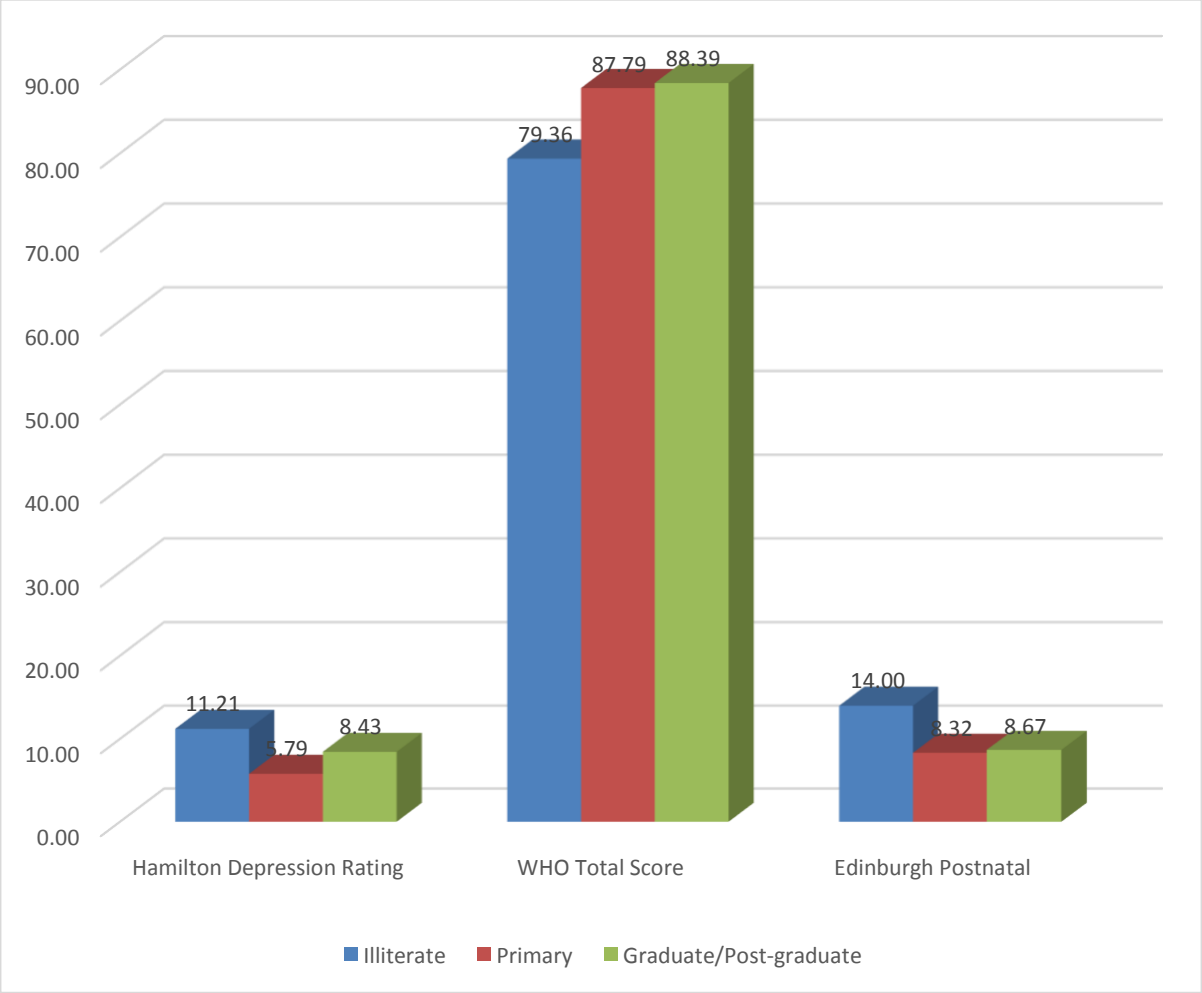

90.00
80.00
70.00
60.00
50.00
10.00
87.34
79.50
6.61
12.00
8.67
14.17
Hamilton Depression Rating
WHO Total Score
Edinburgh Postnatal
No FAMILY H/O SUICIDE
FAMILY H/O SUICIDE

Table 17: Distribution of study population according to

	Mothers Education	Mean	Std. Deviation	F-value	p-value	Post-hoc comparisons
Hamilton Depression Rating Scale Score	Illiterate	11.21	9.59	4.312	0.015 *	
	Primary	5.79	6.24			
	Graduate/ Post-graduate	8.43	8.15			
WHO Total Score	Illiterate	79.36	12.54	3.199	0.044 *	
	Primary	87.79	12.15			
	Graduate/ Post-graduate	88.39	10.88			
Edinburgh Postnatal Depression Scale score	Illiterate	14.00	5.73	4.176	0.018 *	
	Primary	8.32	5.98			
	Graduate/ Post-graduate	8.67	6.74			

The mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score was compared between Illiterate, Primary and Graduate/ Post-graduate using the one-way ANOVA test with post-hoc bonferroni test for inter-group comparisons. The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among illiterate subjects. The mean WHO Total Score was significantly more among Graduate/ Post-graduate.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60.00
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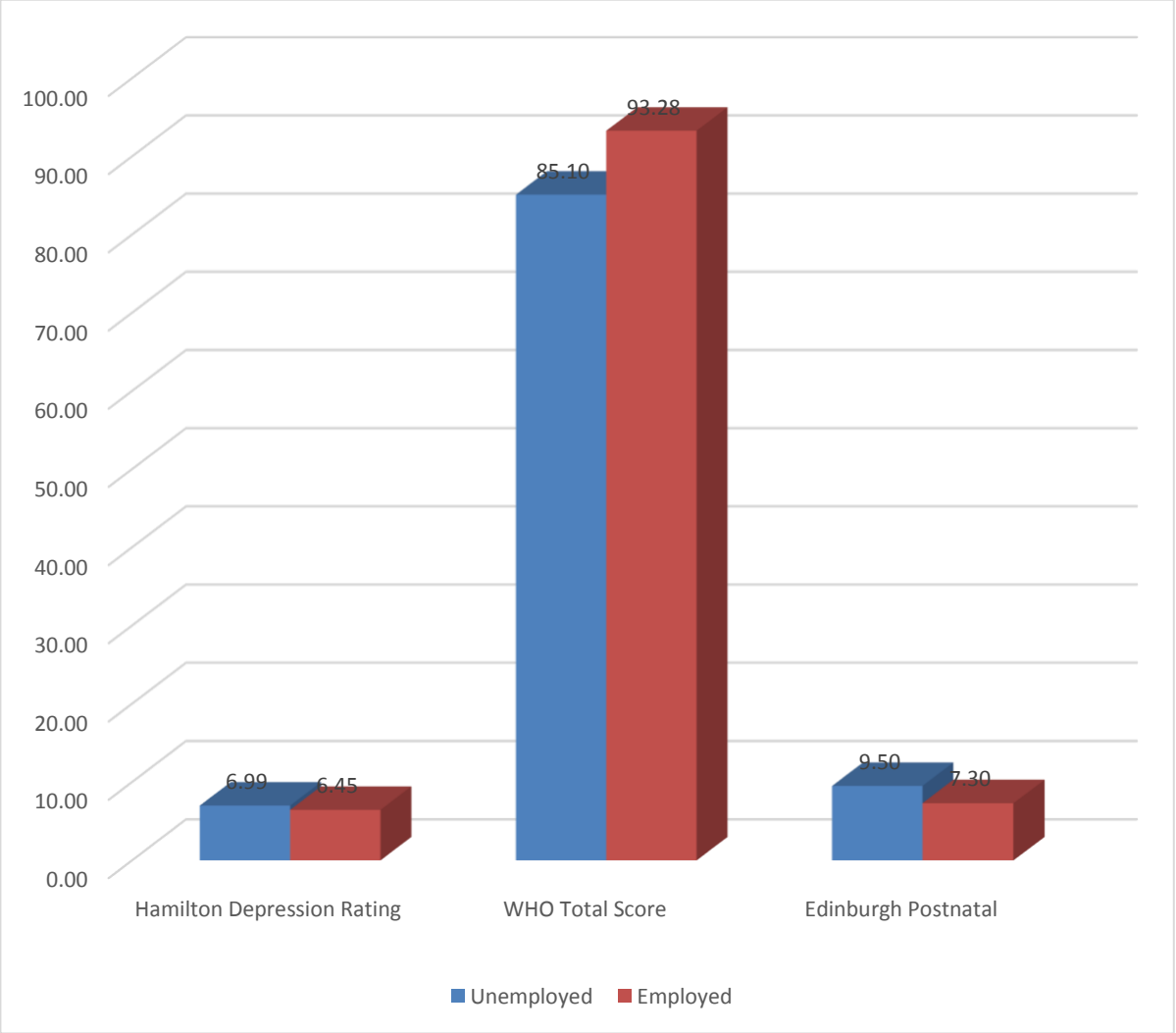
30.00
20.00
10.00
0.00
11.21
5.79
8.43
79.36
87.79
88.39
14.00
8.32
8.67
Hamilton Depression Rating
WHO Total Score
Edinburgh Postnatal
Illiterate
Primary
Graduate/Post-graduate

Table 18: Distribution of study population according to

	Mothers occupation	Mean	Std. Deviation	t-test value	p-value
Hamilton Depression Rating Scale score	Unemployed	6.99	6.92	0.125	0.724
	Employed	6.45	8.24		
WHO Total Score	Unemployed	85.10	11.38	10.855	0.001*
	Employed	93.28	12.90		
Edinburgh Postnatal Depression Scale score	Unemployed	9.50	6.04	2.193	0.142
	Employed	7.30	6.93		

The mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score was compared between Unemployed and Employed mothers using the unpaired t-test. The mean WHO Total Score was significantly more among Employed mothers.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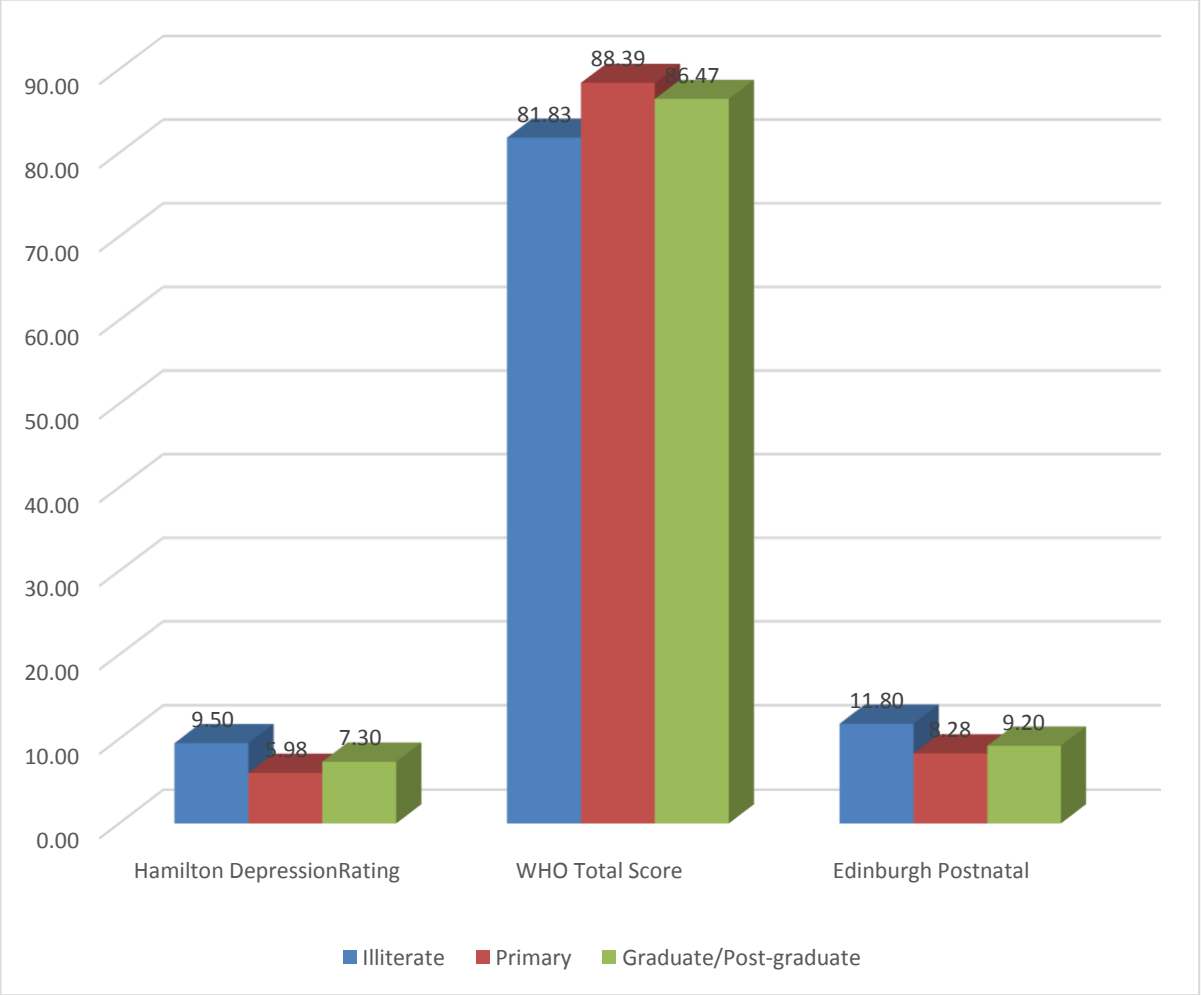
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
6.99
6.45
85.10
93.28
9.50
7.30
Hamilton Depression Rating
WHO Total Score
Edinburgh Postnatal
Unemployed
Employed

Table 19: Distribution of study population according to

	Husband's Education	Mean	Std. Deviation	F-value	p-value	Post-hoc comparisons
Hamilton Depression Rating Scale score	Illiterate	9.50	6.95	1.370	0.258	
	Primary	5.98	7.04			
	Graduate/ Post-graduate	7.30	7.40			
WHO Total Score	Illiterate	81.83	14.73	1.543	0.218	
	Primary	88.39	11.24			
	Graduate/ Post-graduate	86.47	12.53			
Edinburgh Postnatal Depression Scale score	Illiterate	11.80	6.91	1.349	0.264	
	Primary	8.28	6.14			
	Graduate/ Post-graduate	9.20	6.27			

The mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score was compared between Illiterate, Primary and Graduate/ Post-graduate using the one-way ANOVA test with post-hoc bonferroni test for inter-group comparisons. The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among illiterate subjects. The mean WHO Total Score was significantly more among Graduate/ Post-graduate.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80.00
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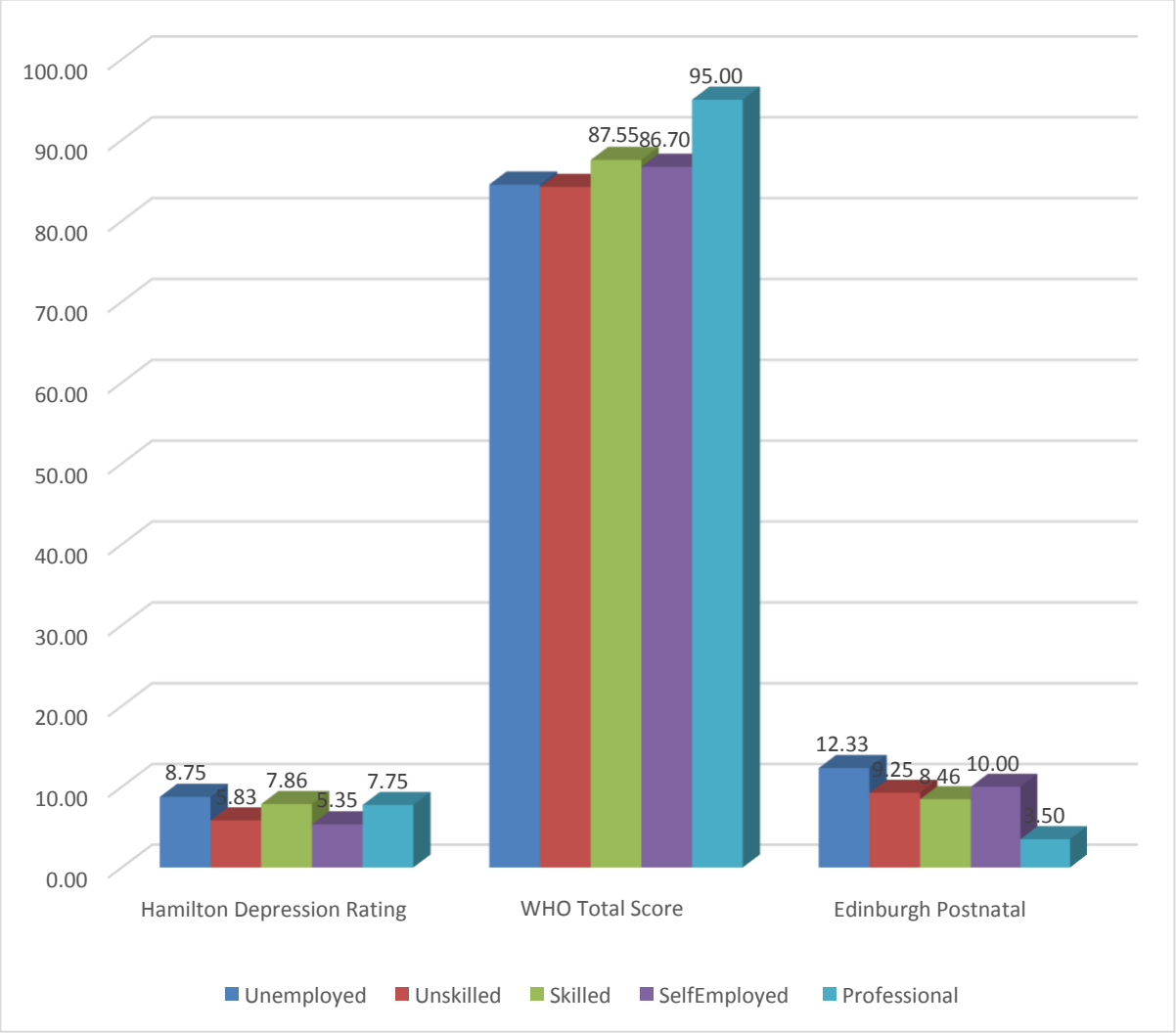
60.00
50.00
40.00
30.00
20.00
10.00
0.00
9.50
7.30
81.83
88.39
11.80
9.20
Hamilton DepressionRating
WHO Total Score
Edinburgh Postnatal
Illiterate
Primary
Graduate/Post-graduate

Table 20: Distribution of study population according to

	Husband's Occupation	Mean	Std. Deviation	F-value	p-value	Post-hoc comparisons
Hamilton Depression Rating Scale score	Unemployed	8.75	4.79	0.885	0.475	
	Unskilled	5.83	3.38			
	Skilled	7.86	7.99			
	Self Employed	5.35	7.06			
	Professional	7.75	9.74			
WHO Total Score	Unemployed	84.50	12.90	0.738	0.568	
	Unskilled	84.22	9.81			
	Skilled	87.55	14.41			
	Self Employed	86.70	9.04			
	Professional	95.00	6.38			
Edinburgh Postnatal Depression Scale score	Unemployed	12.33	7.02	0.858	0.492	
	Unskilled	9.25	5.72			
	Skilled	8.46	6.56			
	Self Employed	10.00	6.08			
	Professional	3.50	4.95			

The mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score was compared between Unemployed, Unskilled, Skilled, Self Employed and Professional using the one-way ANOVA test with post-hoc bonferroni test for inter-group comparisons. There was no significant difference in mean Hamilton Depression Rating Scale score, Edinburgh Postnatal Depression Scale score and WHO Total Score between Unemployed, Unskilled, Skilled, Self Employed and Professional.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40.00
30.00
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10.00
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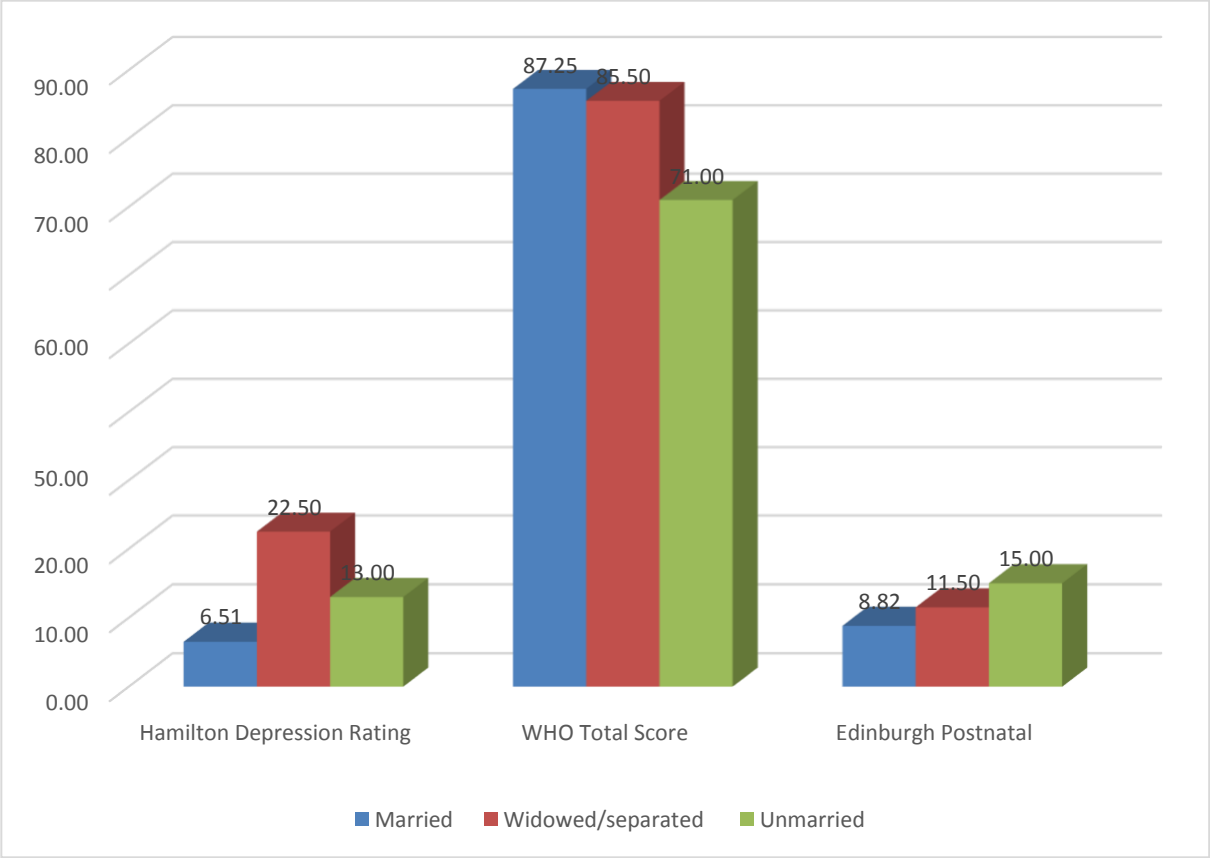
5.83
7.86
5.35
7.75
87.55
86.70
95.00
12.33
9.25
8.46
10.00
3.50
Hamilton Depression Rating
WHO Total Score
Edinburgh Postnatal
Unemployed
Unskilled
Skilled
SelfEmployed
Professional

Table 21: Distribution of study population according to

	Marital Status	Mean	Std. Deviation	F-value	p-value	Post-hoc comparisons
Hamilton Depression Rating Scale Score	Married	6.51	6.94	6.021	0.003 *	
	Widowed/ Separated	22.50	9.19			
	Unmarried	13.00	2.83			
WHO Total Score	Married	87.25	12.06	1.787	0.172	
	Widowed/ Separated	85.50	20.51			
	Unmarried	71.00	5.66			
Edinburgh Postnatal Depression Scale score	Married	8.82	6.28	4.109	0.034 *	
	Widowed/ Separated	11.50	2.12			
	Unmarried	15.00	8.49			

The mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score was compared between Married, Widowed/ separated and Unmarried using the one-way ANOVA test with post-hoc bonferroni test for inter-group comparisons. The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among Unmarried subjects. The mean WHO Total Score was significantly more among married subjects.


90.00
80.00
70.00
60.00
50.00
20.00
10.00
0.00
87.25
85.50
71.00
22.50
13.00
6.51
8.82
11.50
15.00
Hamilton Depression Rating
WHO Total Score
Edinburgh Postnatal
Married
Widowed/separated
Unmarried

DISCUSSION

The study **"**Psychosocial predictive and protective factors for depression in pregnancy and postpartum period**"** was conducted in Santosh Medical College and Hospital in Ghaziabad over a period of 1 year.

A total of 126 participants who gave written and informed consent and fulfilled the inclusion and exclusion criteria , were included in this study.

In our study, statistically significant correlation ($p<0.05$) was seen between depression and patients with financial Debt. The mean quality of life scale was statistically significantly ($p<0.05$) and more among subjects without financial debt.

Similarly, the strongest predictors of postpartum depression, according to Beneret al.[42], were financial issues (OR=2.04; p 0.001), prematurity (OR = 1.64; p = 0.025), low family support (OR=1.52; p = 0.016), unhappiness in married life (OR = 1.26; p = 0.005), and bad marital connection.

In our research, there was a statistically significant link (p 0.05) between patients' sadness and the drug abuse of their spouses. The individuals whose husbands did not use any harmful drugs had considerably (p0.05) higher mean quality of life scores.

Conflicts with family members (AOR: 2.5, 95% CI: 1.5-4.0), experiencing intimate partner violence (AOR: 2.6, 95% CI: 1.3-5.5), and having modest social support (AOR: 5.6, 95% CI: 3.2-10.0) were variables related with depression, according to a similar research by Xayyabouapha et al.[80]

In our analysis, there was no statistically significant association between depression and nuclear or joint family ($P>0.05$). The findings of our research were consistent with those of Alrehaili et al.[81] (2022), who found that women who grew up in nuclear households were less likely to suffer from PPD than those who lived in shared family systems. Naveed and Naz.[82] came to the same findings on the mixed family structure and the higher frequency of PPD. In other words, women who received little to no social support were more likely to have PPD. [83] They found that postpartum depression was five times more likely to occur in women who did not get social assistance after giving birth. Living in a blended family (71%) was also mentioned by Manjunath et al.[43] (2011) as being related to postpartum depression.

In our research, we discovered a statistically significant link (p0.05) between people with a history of medical conditions and depression. Subjects without a history of illness had substantially higher average scores on the Quality of Life measure (p 0.05).

Similarly, Hayes et al.[41] (2010) found that women who experienced intimate partner violence (AOR = 3.7), had unintended pregnancies (AOR = 1.4), smoked (AOR = 1.5), used illegal drugs (AOR = 1.9), or received women, infant, and children (WIC) benefits during pregnancy (AOR = 1.4) were more likely to have SRPDS.

According to Shao et al.[78] (2021), women who were younger, primiparous, and who had prenatal problems had a greater incidence of PPD, whereas those who were nursing, had more family support, and went to a postpartum care center had considerably lower odds ratios for the condition.

In our investigation, we discovered statistically (p0.05) that participants with a history of mental disease had a higher frequency of depression. Subjects without a history of mental illness scored considerably (p 0.05) higher on the mean quality of life measure.

According to Manjunath et al. [43] (2011), 9% of the women had had a prior miscarriage, 8% had a history of mental illness, and two moms exhibited a clear suicidal propensity (by EPDS). Mental health issues during pregnancy were among the variables identified by Xayyabouapha et al.[80] (2022) as being related with depression (AOR: 3.3, 95% CI: 1.4-7.6).

In our investigation, patients who had a history of prior mental hospitalization had substantially higher mean Hamilton Depression Rating Scale and Edinburgh Postnatal Depression Scale scores (p 0.05). Subjects without a history of prior mental hospitalization had substantially higher mean scores on the Quality of Life measure (p 0.05). Subjects with a family history of mental illness had substantially higher mean Hamilton Depression Rating Scale and Edinburgh Postnatal Depression Scale scores (p 0.05). Subjects without a family history of mental disease had substantially (p0.05) higher mean quality of life scale total scores. Subjects with Family H/O Suicide had substantially higher mean Hamilton Depression Rating Scale and Edinburgh Postnatal Depression Scale scores (p 0.05).

Walker et al.[79] (2021) confirmed this finding and noted that abuse, antepartum depressive symptoms (AOR = 3.86, 95% CI 1.46-3.73), and having a child with a congenital anomaly (AOR = 2.33, 1.46-3.73) were the highest risk factors for postpartum depression.

In our research, moms who were illiterate had substantially higher mean Hamilton Depression Rating Scale and Edinburgh Postnatal Depression Scale scores (p 0.05). Mothers with Graduate or Post-Graduate degrees had a considerably higher mean quality of life scale (p 0.05).

Among moms who were employed, the mean quality of life scale was considerably higher (p 0.05).

Similar to our findings, Moraitou et al.[40] (2010) found that 13.7% of the participants were at risk of developing postpartum depression according to the Edinburg postnatal depression scale and that 21.3% of the individuals suffered depression according to the BDI. While factors like age, occupation, and educational attainment did not relate to postpartum depression, these findings were found to be related to psychopathology that existed before childbirth. According to Beneret al.[42], mothers who were older than 35, had low education—below the intermediate level, were housewives, and had low monthly income were significantly (p0.05) at high risk for developing postpartum depression.

Poor marital connections and a lack of social support, according to O'Hara and Swain's research, were strongly linked to depressed symptoms.[84] An earlier study in Nepal found a substantial correlation between depressed symptoms and poor income, the job of the mother, and low social standing.[85]

In our study we found statistically significantly correlation ($p<0.05$) among patient's husband illiteracy . The mean quality of life scale was significantly ($p<0.05$) more among Graduate/ Post-graduate husband of patient.

There was no significant ($P>0.05$) difference in mean Hamilton Depression Rating Scale score, Edinburgh Postnatal Depression Scale score and WHO Total Score between Unemployed, Unskilled, Skilled, Self Employed and Professional.

In our study, the mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly ($p<0.05$) more among Unmarried subjects. The mean quality of life scale was significantly ($p<0.05$) more among married subjects.

Manjunath et al.[43] also stated that Poor marital relationship (91%, $P<0.001$) and deficit of emotional-physical support ($P<0.001$) were also associated with Postpartum depression. *Alrehaili and Albelowi*.[81] (2022) concluded that the number of prior children, child health, income status, and family support all have a positive association. *Azale et al*.[77] (2018) found that Social adversity and reproductive health threats were associated with poorer mental health. Interventions focusing on poor rural women with low access to care are necessary.

Giri et al.[55] (2015) reported that tragic consequences including infanticide and maternal suicide have been linked to PPD. PPD has also been linked to economic hardship, the gender of the baby, marital abuse, smoking while pregnant, and hunger.[86]

SUMMARY AND CONCLUSION

This study was conducted in the Department of Psychiatry, Santosh Medical College and Hospital, Ghaziabad U.P in 1 year time periods. This study was done with the aim to find out psychosocial predictive and protective factors for depression in pregnancy and postpartum period in patients visiting obstetrics and gynecology department

This study was carried out on 126 participants visiting obstetrics and gynecology department. It was a cross sectional study and participants were evaluated with Hamilton Depression Rating Scale, The Edinburgh Postnatal Depression Scale (EPDS), Quality of Life Scale (QOLS). The data collected was tabulated and analyzed.

- Majority (46.5%) of the subjects had primary level of education and were Unemployed (77.2%). Joint family was reported among 39.4% and Nuclear family among 60.6% subjects.
- Financial Debt was present among 23.6%, Husband Substance Abuse among 16.5%, Marital Status was married among 96.9%, Unmarried among 1.6%, Separated and Widowed among 1 (0.8%) subject each.Marital Relationship was Fair, Good and Poor among 38.6%, 56.7% and 4.7% subjects respectively.Separation Due to Conflict was present among 6.3% subjects.
- No. of Living children was None among 33.1%, 1 among 38.6%, 2 among 18.9%, 3 among 7.9%, 4 and 5 among 1 (0.8%) subject each.
- Past medical history showed Anemia among 10.2%, DM among 1.6%, Hypertension among 2.4%, Thyroid dysfunction among 2.4%, COPD and Tuberculosis among 1 (0.8%) subject each.
- Past h/o psychiatric illness was present among 3.1%, Past h/o psychiatric illness if yes h/o treatment among 62.2% and H/o previous psychiatric hospitalization among 3.1% subjects.
- Family h/o psychiatric illness was present among 5.5%, Family h/o suicide among 15.0% and Family h/o suicide among relations of 1st degree among 12.6%, 2nd degree among 1.6% and 3rd degree among 1.6% subjects.
- Obstetric history – parity showed primipara among 49.6% and multipara among 50.4% subjects.
- Current pregnancy care given by Both, Husband and Parents by 59.8%, 27.6% and 12.6% subjects respectively.
- H/o infertility was present among 2.4% subjects.
- Pregnancy was Planned, Unplanned and Unwanted among 76.4%, 22.8% and 0.8% subjects respectively.
- Previous h/o abortion/ IUD/ SB/ loss of child/ preterm was present among 17.3% subjects.
- Pregnancy was high risk among 4.7% and Normal among 95.3%.
- Having regular check-up were reported by 84.3%. Access for periodic care was present among 82.7%
- Significant stressful life events during pregnancy in friends/relatives were reported by 16.5%.

- Wt -neonatal problems were present among 7.1%
- Postpartum complications were present among 42.5% subjects.
- Breast feeding [breast feeding at any time during postpartum], Breast feeding [use of formula feeds] and Breast feeding [satisfied with breast feeding] was reported among 33.9%, 31.5% and 39.4% subjects respectively.
- The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among subjects with Financial Debt. The mean WHO Total Score was significantly more among subjects without Financial Debt.
- The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among subjects with Husband Substance Abuse. The mean WHO Total Score was significantly more among subjects without Husband Substance Abuse.
- There was no significant difference in mean Hamilton Depression Rating Scale score, WHO Total Score and Edinburgh Postnatal Depression Scale score between Joint and Nuclear family.
- The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among subjects with Past Medical History. The mean WHO Total Score was significantly more among subjects without Past Medical History.
- The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among subjects with Past H/O Psychiatric Illness. The mean WHO Total Score was significantly more among subjects without Past H/O Psychiatric Illness.
- The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among subjects with H/o previous psychiatric hospitalization. The mean WHO Total Score was significantly more among subjects without H/o previous psychiatric hospitalization.
- The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among subjects with Family H/O Psychiatric Illness. The mean WHO Total Score was significantly more among subjects without Family H/O Psychiatric Illness.
- The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among subjects with Family H/O Suicide.
- The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among illiterate subjects. The mean WHO Total Score was significantly more among Graduate/ Post-graduate.
- The mean WHO Total Score was significantly more among Employed mothers.
- The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among illiterate subjects. The mean WHO Total Score was significantly more among Graduate/ Post-graduate.

- There was no significant difference in mean Hamilton Depression Rating Scale score, Edinburgh Postnatal Depression Scale score and WHO Total Score between Unemployed, Unskilled, Skilled, Self Employed and Professional.
- The mean Hamilton Depression Rating Scale score and Edinburgh Postnatal Depression Scale score was significantly more among Unmarried subjects. The mean WHO Total Score was significantly more among married subjects.

In our research, postpartum depression was shown to be rather common. Major life events and trauma have been related to a higher incidence of postpartum depression. The number of prior children, the wellbeing of the kids, their financial situation, and family support are all positively correlated. Given its high incidence, postpartum depression is an important public health issue that demands both prevention and treatment measures. Health care professionals should be aware of the mother's situation during the pregnancy. To reduce the risk of depression, they should seek assistance as soon as possible after giving birth. As a consequence, we advise screening new moms to help with early intervention, management, and emotional support.

Stress during pregnancy and health issues brought on by pregnancy were linked to the incidence of PPD symptoms. Routine maternity care services should include the evaluation of depressive symptoms in postpartum moms who have pregnancy-related health issues and subjective experiences of stress.

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SANTOSH MEDICAL COLLEGE & HOSPITAL

GHAZIABAD, U.P

SUBJECT INFORMATION SHEET

You are being requested to take part in a study entitled "Psychosocial predictive and protective factors for depression in pregnancy and postpartum period".

VOLUNTRY PARTICIPATION

Your participation in this study is entirely voluntary and you are free to withdraw from this study as and when you feel so.

RISK (IF ANY)

This is an absolutely safe study. There is no risk involved per se.

CONSENT FORM

I _____ have been explained by Dr. Sakshi Sharma about the nature of study. I volunteer to take part in the study "Psychosocial predictive and protective factors for depression in pregnancy and postpartum period" and have also explained me the purpose of the study to my satisfaction. I hereby give my consent to be enrolled in the study.

Signature of participant:

Date:

Hamilton Depression Rating Scale (HDRS)

PLEASE COMPLETE THE SCALE BASED ON A STRUCTURED INTERVIEW
Instructions: for each item select the one "cue" which best characterizes the patient. Be sure to record the answers in the appropriate spaces (positions 0 through 4).

1 DEPRESSED MOOD *(sadness, hopeless, helpless, worthless)*
0 |__| Absent.
1 |__| These feeling states indicated only on questioning.
2 |__| These feeling states spontaneously reported verbally.
3 |__| Communicates feeling states non-verbally, i.e. through facial expression, posture, voice and tendency to weep.
4 |__| Patient reports virtually only these feeling states in his/her spontaneous verbal and non-verbal communication.

2 FEELINGS OF GUILT
0 |__| Absent.
1 |__| Self reproach, feels he/she has let people down.
2 |__| Ideas of guilt or rumination over past errors or sinful deeds.
3 |__| Present illness is a punishment. Delusions of guilt.
4 |__| Hears accusatory or denunciatory voices an

3 SUICIDE
0 |__| Absent.
1 |__| Feels life is not worth living.
2 |__| Wishes he/she were dead or any thoughts of possible death to self.
3 |__| Ideas or gestures of suicide.
4 |__| Attempts at suicide (any serious attempt rate 4).

4 INSOMNIA: EARLY IN THE NIGHT
0 |__| No difficulty falling asleep.
1 |__| Complains of occasional difficulty falling asleep, i.e. more than 1⁄2 hour.
2 |__| Complains of nightly difficulty falling asleep.

5 INSOMNIA: MIDDLE OF THE NIGHT
0 |__| No difficulty.
1 |__| Patient complains of being restless and disturbed during the night.
2 |__| Waking during the night – any getting out of bed rates 2 (except for purposes of voiding).

6 INSOMNIA: EARLY HOURS OF THE MORNING
0 |__| No difficulty.
1 |__| Waking in early hours of the morning but goes back to sleep.
2 |__| Unable to fall asleep again if he/she gets out of bed.

7 WORK AND ACTIVITIES
0 |__| No difficulty.
1 |__| Thoughts and feelings of incapacity, fatigue or weakness related to activities, work or hobbies.

2 |__| Loss of interest in activity, hobbies or work – either directly reported by the patient or indirect in listlessness, indecision and vacillation (feels he/she has to push self to work or activities).

3 |__| Decrease in actual time spent in activities or decrease in productivity. Rate 3 if the patient does not spend at least three hours a day in activities (job or hobbies) excluding routine chores.

4 |__| Stopped working because of present illness. Rate 4 if patient engages in no activities except routine chores, or if patient fails to perform routine chores unassisted.

8 RETARDATION (slowness of thought and speech, impaired ability to concentrate, decreased motor activity)
0 |__| Normal speech and thought.
1 |__| Slight retardation during the interview.
2 |__| Obvious retardation during the interview.
3 |__| Interview difficult.
4 |__| Complete stupor.

9 AGITATION
0 |__| None.
1 |__| Fidgetiness.
2 |__| Playing with hands, hair, etc.
3 |__| Moving about, can't sit still.
4 |__| Hand wringing, nail biting, hair-pulling, biting of lips.

10 ANXIETY PSYCHIC
0 |__| No difficulty.
1 |__| Subjective tension and irritability.
2 |__| Worrying about minor matters.
3 |__| Apprehensive attitude apparent in face or speech.
4 |__| Fears expressed without questioning.

11 ANXIETY SOMATIC (physiological concomitants of anxiety) such as:
gastro-intestinal – dry mouth, wind, indigestion, diarrhea, cramps, belching
cardio-vascular – palpitations, headaches
respiratory – hyperventilation, sighing
urinary frequency
sweating
0 |__| Absent.
1 |__| Mild.
2 |__| Moderate.
3 |__ 3 |__| Severe.
4 |__| Incapacitating.

12 SOMATIC SYMPTOMS GASTRO-INTESTINAL
0 |__| None.
1 |__| Loss of appetite but eating without staff encouragement. Heavy feelings in abdomen.
2 |__| Difficulty eating without staff urging. Requests or requires laxatives or medication for bowels or medication for gastro-intestinal symptoms.

13 GENERAL SOMATIC SYMPTOMS

0 |__| None.

1 |__| Heaviness in limbs, back or head. Backaches, headaches, muscle aches. Loss of energy and fatigability.

2 |__| Any clear-cut symptom rates 2

14 GENITAL SYMPTOMS (symptoms such as loss of libido, menstrual disturbances)

0 |__| Absent.

1 |__| Mild.

2 |__| Severe.

15 HYPOCHONDRIASIS

0 |__| Not present.

1 |__| Self-absorption (bodily).

2 |__| Preoccupation with health.

3 |__| Frequent complaints, requests for help, etc.

4 |__| Hypochondriacal delusions.

16 LOSS OF WEIGHT *(RATE EITHER a OR b)*

a) According to the patient:

0 |__| No weight loss.

1 |__| Probable weight loss associated with present illness.

2 |__| Definite (according to patient) weight loss.

3 |__| Not assessed.

b) According to weekly measurements:

0 |__| Less than 1 lb weight loss in week.

1 |__| Greater than 1 lb weight loss in week.

2 |__| Greater than 2 lb weight loss in week.

3 |__| Not assessed.

17 INSIGHT

0 |__| Acknowledges being depressed and ill.

1 |__| Acknowledges illness but attributes cause to bad food, climate, overwork, virus, need for rest, etc.

2 |__| Denies being ill at all.

Total score: |__|__|

Edinburgh Postnatal Depression Scale[1] (EPDS)

Name:_____ **Address:** _____

Your Date of Birth: _____ _____

Baby's Date of Birth:_____ Phone: _____

As you are pregnant or have recently had a baby, we would like to know how you are feeling. Please check the answer that comes closest to how you have felt **IN THE PAST 7 DAYS**, not just how you feel today.

Here is an example, already completed.

I have felt happy:

- Yes, all the time
- Yes, most of the time
- No, not very often .
- No, not at all

In the past 7 days:

1. I have been able to laugh and see the funny side of things
   - □ As much as I always could
   - □ Not quite so much now
   - □ Definitely not so much now
   - □ Not at all

2. I have looked forward with enjoyment to things
   - □ As much as I ever did
   - □ Rather less than I used to
   - □ Definitely less than I used to
   - □ Hardly at all

*3. I have blamed myself unnecessarily when things went wrong
   - □ Yes, most of the time
   - □ Yes, some of the time
   - □ Not very often
   - □ No, never

4. I have been anxious or worried for no good reason
   - □ No, not at all
   - □ Hardly ever
   - □ Yes, sometimes
   - □ Yes, very often

*5 I have felt scared or panicky for no very good reason
   - □ Yes, quite a lot
   - □ Yes, sometimes
   - □ No, not much
   - □ No, not at all

*6. Things have been getting on top of me
   - □ Yes, most of the time I haven't been able to cope at all
   - □ Yes, sometimes I haven't been coping as well as usual
   - □ No, most of the time I have coped quite well
   - □ No, I have been coping as well as ever

*7 I have been so unhappy that I have had difficulty sleeping
   - □ Yes, most of the time
   - □ Yes, sometimes
   - □ Not very often
   - □ No, not at all

*8 I have felt sad or miserable
   - □ Yes, most of the time
   - □ Yes, quite often
   - □ Not very often
   - □ No, not at all

*9 I have been so unhappy that I have been crying
   - □ Yes, most of the time
   - □ Yes, quite often
   - □ Only occasionally
   - □ No, never

*10 The thought of harming myself has occurred to me
   - □ Yes, quite often
   - □ Sometimes
   - □ Hardly ever
   - □ Never

QUALITY OF LIFE SCALE (QOL)

1. How would you rate your quality of life?

Very poor	Poor	Neither poor nor good	Good	Very Good
1	**2**	**3**	**4**	**5**

2. How satisfied are you with your health?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	**2**	**3**	**4**	**5**

3. To what extent do you feel that physical pain prevents you from doing what you need to do?

Not at all	A little	A moderate amount	Very much	An extreme amount
1	**2**	**3**	**4**	**5**

4. How much do you need any medical treatment to function in your life?

Not at all	A little	A moderate amount	Very much	An extreme amount
1	**2**	**3**	**4**	**5**

5. How much do you enjoy life?

Not at all	A little	A moderate amount	Very much	An extreme amount
1	**2**	**3**	**4**	**5**

6. To what extent do you feel your life to be meaningful?

Not at all	A little	A moderate amount	Very much	An extreme amount
1	**2**	**3**	**4**	**5**

7. How well are you able to concentrate?

Not at all	A little	A moderate amount	Very much	An extreme amount
1	**2**	**3**	**4**	**5**

8. How safe do you feel in your daily life?

Not at all	Slightly	A moderate amount	Very much	Extremely
1	**2**	**3**	**4**	**5**

9. How healthy is your physical environment?

Not at all	Slightly	A moderate amount	Very much	Extremely
1	**2**	**3**	**4**	**5**

10. Do you have enough energy for everyday life?

Not at all	A little	Moderately	Mostly	Completely
1	**2**	**3**	**4**	**5**

11. Are you able to accept your bodily appearance?

Not at all	A little	Moderately	Mostly	Completely
1	**2**	**3**	**4**	**5**

12. Have you enough money to meet your needs?

Not at all	A little	Moderately	Mostly	Completely
1	**2**	**3**	**4**	**5**

13. How available to you is the information that you need in your day-to-day life?

Not at all	A little	Moderately	Mostly	Completely
1	**2**	**3**	**4**	**5**

14. To what extent do you have the op portunity for leisure activities?

Not at all	A little	Moderately	Mostly	Completely
1	**2**	**3**	**4**	**5**

15.How well are you able to get around?

Very poor	Poor	Neither poor nor well	Well	Very well
1	**2**	**3**	**4**	**5**

16. How satisfied are you with your sleep?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	**2**	**3**	**4**	**5**

17. How satisfied are you with your ability to perform your daily living activities.

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	**2**	**3**	**4**	**5**

18. How satisfied are you with your capacity for work?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	**2**	**3**	**4**	**5**

19. How satisfied are you with yourself?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	**2**	**3**	**4**	**5**

20. How satisfied are you with your personal relationships?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	**2**	**3**	**4**	**5**

21. How satisfied are you with your sex life?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	**2**	**3**	**4**	**5**

22. How satisfied are you with the support you get from your friends?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	**2**	**3**	**4**	**5**

23. How satisfied are you with the conditions of your living place?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	**2**	**3**	**4**	**5**

24. How satisfied are you with your access to health services?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	**2**	**3**	**4**	**5**

25. How satisfied are you with your mode of transportation?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	**2**	**3**	**4**	**5**

26. How often do you have negative feelings, such as blue mood, despair, anxiety, depression?

Never	Seldom	Quite often	Very often	Always
1	**2**	**3**	**4**	**5**

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Document Information

Analyzed document	DR. SAKSHI SHARMA THESIS PLAG CHECK..docx (D149217395)
Submitted	11/10/2022 10:11:00 AM
Submitted by	Dr Jyoti Batra
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Similarity	2%
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Sources included in the report

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PSYCHOSOCIAL PREDICTIVE AND PROTECTIVE FACTORS FOR DEPRESSION IN PREGNANCY AND POSTPARTUM PERIOD INTRODUCTION